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ABSTRACT

A study examined Florida's certification process for postsecondary vocational education teachers. After reviewing previous research on the certification of vocational educators in Florida, the commission solicited data analyzing the differences in teaching ability between certified and noncertified vocational teachers and the content validity, availability, and adequacy of funding for preservice vocational teacher education programs. Commission members also conducted on-site visits to designated vocational-technical centers and schools. The data collected were analyzed and incorporated into a series of recommendations addressing (1) certification requirements for vocational personnel; (2) preservice vocational education; (3) inservice education, technical updating, and recertification; and (4) the State master teacher program and salary compensation for vocational personnel. (Appendixes to this report include a breakdown of occupational categories for vocational certification by the State, the survey instruments used to examine preservice programs, the schedule and interview forms for the on-site visits, a list of occupational tests available through the National Occupational Competency Testing Institute, a summary of 1983-84 project funding by the Federal Vocational Education Act, and a list of the members of the project's panel of experts.) (MN)

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POSTSECONDARY EDUCATION PLANNING COMMISSION

A Study of Postsecondary Vocational Teacher
Preparation and Certification

A Study Prepared in Response to
Appropriation Item 459
of the
1984 General Appropriations Act
(Chapter 84-220, Laws of Florida)

1985 - Report No. 4

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EXECUTIVE SUMMARY

In proviso language accompanying Specific Appropriation 459, the 1984 Legislature directed the Postsecondary Education Planning Commission "to conduct a study of the certification and preparation of vocational education teachers. The study shall include:

- An analysis of the extent to which certification requirements contribute to the shortage of qualified vocational teachers.
- An analysis of the differences in teaching ability between certified and noncertified vocational educators.
- A determination of the adequacy of funding for preservice and inservice training for vocational educators.
- A determination of the adequacy of preservice and inservice training for vocational teachers in terms of availability and content validity.
- A determination of appropriate criteria related to excellence in teaching through which vocational educators may participate in a state merit pay plan, including the role of educational degrees in such criteria."

This study was viewed as a follow-up to the 1983-84 Commission studies of Colleges of Education and Postsecondary Vocational Education in Florida, and the recommendations of the 1983-84 Speaker's Advisory Committee on Vocational Education. Among the primary concerns which led to this study was the belief that the certification and preparation process for vocational education teachers may be discouraging persons in industry with specialized vocational expertise from entering the teaching profession, particularly at a time when vocational training and retraining needs in Florida are increasing. Another major concern was the growing awareness that vocational educators in both community colleges and school districts may not be up-to-date in the latest technology.

The Commission explored four major issues during the course of this study and developed recommendations for each topic. The primary recommendations focus on the need for greater flexibility in state certification requirements for vocational personnel and the necessity for inservice education and technical updating. Each issue and its associated set of recommendations are listed below. Please refer to the full report for additional explication of any given issue.

Certification Requirements for Vocational Personnel

The certification process for postsecondary vocational education differs by sectors. In brief, Florida vocational education teaching certificates are required of instructors in postsecondary vocational education programs which are administered by school districts. Teaching certificates for over 130 discrete areas are available in the general fields of business, agriculture, technical, industrial, health, cooperative, distributive, and home economics education.

During the past seven years, the state requirements for initial certification in the K-12 sector have been expanded --a Florida Teacher Certification Examination

which measures basic skills and professional competencies was created in 1980, and the performance-based Beginning Teacher Program was added in 1982. Several proposals have been presented recently to the State Board of Education and Legislature to add a subject matter examination as well.

When the state board rules governing state certification for community college personnel were repealed in 1978, the state certification requirements included 20 hours of education coursework and six years of occupational experience. While many community colleges have deleted the education coursework requirement, most local boards of trustees at community colleges continue to require six years of occupational experience in the specific area in which the vocational instructor is hired to teach. State certification requirements for vocational teachers in school districts continue to mandate 20 hours of education coursework and six years of occupational experience in addition to the Florida Teacher Certification Examination and the Beginning Teacher Program. Thus, as state certification requirements have become more rigorous for school districts, community college requirements for vocational personnel have become more flexible.

Most individuals, who testified at the Commission's February 20th public hearing held in connection with this study, expressed dissatisfaction with the present system of state certification. Testimony received reinforced the Commission's belief that inflexible state certification requirements have contributed to the shortage of qualified vocational personnel in school districts. However, abundant testimony also indicated that state certification has provided a minimum level of quality assurance for vocational educators teaching in Florida school districts and a valuable safeguard against political intervention at the local level.

The Commission has concluded that state certification should be retained, but made more flexible for school district vocational teachers. Several recommendations to increase the flexibility in the present system are provided. The Commission recognizes that the needs of, and state requirements for, full-time degree teachers in vocational education are different than those of full-time non-degree teachers, and the needs and requirements for part-time vocational personnel are different than full-time personnel. Those differences are addressed separately in the report. The Commission has also concluded that local control should be retained for setting the standards of vocational educators in community colleges. However, community colleges are encouraged, when appropriate, to incorporate certain minimum standards utilized by the State when hiring vocational personnel.

Recommendations:

1. State certification for postsecondary vocational educators in K-12 public schools should be retained; however, the current requirements should be made more flexible and focus on instructor performance through the certification examination, classroom performance assessment, and subject matter testing.
2. The standards for the hiring of community college personnel in postsecondary vocational education should continue to be set by each local board of trustees.

3. To increase the supply of degree and nondegree vocational teachers, particularly in critical shortage areas, two approaches are recommended:

- For degree vocational teachers, the alternate certification program enacted by the 1984 Legislature should be utilized by Florida school districts to employ teachers who are competent in the classroom but who lack the necessary education coursework to obtain regular teaching certificates.
- For non-degree teachers, special training programs should be established for teachers to acquire necessary teaching competencies similar to the programs which have effectively been developed by Dade, Pinellas and Broward school districts. Additional Teacher Education Center dollars or federal vocational grant funds should be redirected for this purpose. Smaller districts should be encouraged to provide this special training collaboratively with other districts. Community college vocational personnel should be allowed to participate. Local regional coordinating councils should promote these collaborative training programs for the nondegree vocational teachers to acquire necessary teaching competencies and meet state certification requirements.

In developing implementation guidelines and procedures for these modified certification programs, the Department of Education's Office of Teacher Certification should secure the input of the Division of Vocational, Adult and Community Education and recognize the unique characteristics of the vocational educator. Rigid state standards should not be imposed which require that the training programs developed locally by school districts be equated to university coursework. Programs which have been developed and effectively implemented through a one-year sequence should not be increased to two years because of additional standards imposed by the State.

4. The Florida Teacher Certification Examination (FTCE) should be revised in light of the special needs of vocational educators as follows:

- The comparison of the basic skills components of CLAST with those of the FTCE should be completed by the Department of Education before a decision is made regarding the use of CLAST in the certification process. If the competencies measured by the CLAST are found to be at an equal or higher level than the FTCE, then the CLAST should be substituted for the basic skills component (reading, writing, mathematics subtests) of the FTCE for all academic teachers and degree vocational teachers. Candidates who have passed the CLAST or an equivalent measure of basic skills previously should be exempt from the basic skills section of the FTCE.
- Nondegree vocational educators should continue to take the basic skills component of the current FTCE or an examination which would measure basic skill competencies at the high school level.
- The use of the National Occupational Competency Testing Institute (NOCTI) exams or other validated examinations as the subject matter component of the FTCE should be considered in certain industrial and health areas; subject matter examinations should be developed in areas

in which instruments are not currently available. These subject matter examinations should be updated on a rotating basis. In the absence of a validated examination for a particular field, a panel of experts should determine attainment by the applicant of the necessary knowledge and skills specified in the curriculum framework and student performance standards.

5. Current efforts of the Division of Vocational, Adult, and Community Education to examine the Florida Performance Measurement System (FPMS) for modifications appropriate to vocational education should be endorsed. A broadly based task force should be established to review the necessary modifications. Revisions should include a review of the research on vocational teaching, necessary modifications in the FPMS instrumentation, and examples from vocational education in the coding manual which is utilized to train observers for the evaluation of vocational educators.
6. College of Education faculty in vocational education should be trained in the use of the FPMS so that the teaching competencies which it assesses can be incorporated into preservice vocational education programs.
7. To ensure quality standards for the certification of vocational educators in Florida and to guarantee that each vocational teacher has the necessary skills and knowledge required in a specific trade or industrial program area, the current number of occupational categories in vocational education should not be reduced significantly. In collaboration with the Division of Vocational Education, the Education Standards Commission should examine the existing certification categories to determine if certain vocational education certification areas are obsolete or in need of expansion, and when appropriate, delete or augment these discrete areas.
8. The curriculum framework and student performance standards for each occupational category which have been developed by the Division of Vocational, Adult and Community Education should be periodically updated. Attainment of the knowledge and skills competencies should be demonstrated through subject matter examinations and performance assessments.
9. Through the program review process, the Division of Vocational, Adult, and Community Education should monitor the use of part-time certificates by school districts for compliance with state requirements.

Preservice Vocational Education Programs

As part of this study, the Commission was asked to examine the preservice education programs in terms of content validity, funding, and availability. Baccalaureate degree programs in vocational education are offered in the areas of industrial arts education, agricultural education, business education, home economics education, marketing and distributive education, and health occupations education. Data obtained from the Office of Teacher Certification indicate that less than one-third of the vocational educators enter the teaching profession through these traditional undergraduate degree programs. Based on the Commission's analysis in this area, it appears that state universities do not have a comprehensive plan for updating their preservice vocational education programs. Also, competency-based instructional materials developed by the State for each occupational area are frequently not included in the curriculum of these preservice programs.

Approximately one-third of the preservice education programs do not have an advisory committee. Of those who do, less than half indicated that advisory councils were involved in the design of program curricula. Functional advisory councils with active involvement from business and industry can be of valuable assistance in validating the necessary teacher competencies and ensuring that instructional materials, equipment and training devices are updated periodically. While most faculty stated that opportunities existed for professional updating, only ten percent of the faculty stated that a faculty exchange program with business and industry was operational.

Recommendations:

10. Competency-based curriculum materials which are designed on the basis of the latest technology and which are updated periodically should become an integral part of all preservice vocational education programs.
11. Vocational education advisory councils in specific areas should be involved in the design and review of the undergraduate program to ensure the validity and relevance of equipment, coursework and program content.
12. College of Education faculty exchange programs with business and industry to keep faculty up-to-date in rapidly changing technical areas should be encouraged and facilitated.

Inservice Education, Technical Updating and Recertification

In recent years, the issue of maintaining the technical skills of vocational instructors has become the object of increasing attention and concern. Changes in both the workplace and the teaching profession have resulted in an unprecedented demand for mechanisms to assure that the knowledge and skills of vocational educators are up-to-date. The composition of the teaching staff to meet the challenges imposed by accelerating technical changes is characterized by individuals whose familiarity with the changing workplace is limited. Contributing to this situation are a number of factors, including continuing contracts and tenure, which encourage teacher longevity and reduce the number of openings for new personnel; declining enrollments which require the elimination of those faculty with the least seniority and the most recent actual experience in business and industry; and state certification requirements which discourage business and industry personnel from entering the teaching work force.

While a number of exemplary practices in the area of technical updating were identified during the course of the study, the lack of consistent statewide standards was evident. Such a systematic approach should serve as a primary motivating force for vocational educators to upgrade their technical knowledge and skills. Six years of work experience is the general requirement for initial certification of a non-degree vocational instructor. Once certified however, the emphasis on experience in the workplace diminishes. Under present policy in statute and rule, a vocational instructor may be recertified for five years based on satisfactory completion of six semester hours of college coursework three of which must be related to education but not necessarily vocational education or the instructor's area of expertise. While it is clear that a greater focus on relevant technical training is needed for recertification, it is also obvious that the period for which such training will remain current varies significantly among vocational fields. While home economics instructors

can probably continue to be recertified on a five-year cycle, rapid changes in electronics technology demand a more frequent review.

The success of efforts to encourage increased inservice activities for vocational educators is heavily dependent on the availability of funds to carry out this training. State funds are earmarked within the Florida Education Finance Program for inservice training for school district personnel. For each unweighted FTE, \$6 is set aside for this purpose. Statewide, this amounts to approximately \$9 million annually. The most recent data available from the Office of Teacher Education indicates that vocational instructors in school districts are not receiving an equitable share of these funds. A similar situation appears to exist in community colleges.

One explanation suggested for the relatively low availability of state and locally-funded inservice activities was the presence of Federal Vocational Act Funds earmarked for this purpose. The general distribution of these funds amounted to \$1,384,226 in 1983-84. Although the State Plan for Vocational Education lists technical updating as the first of four priorities for the use of federal personnel development funds, further analysis reveals only \$99,000 or 7.1 percent was used for technical updating. Several recommendations are provided to promote greater utilization of funds for technical updating. Strategies are also presented for accessing the most appropriate means for vocational teacher updating.

Recommendations:

13. School district and community college vocational instructors should be required to periodically update technical knowledge and skills in their specific field of expertise in accordance with statewide standards.
14. Members of the regional coordinating councils and local vocational craft committees should participate in school district and community college vocational program reviews to assure the currency of vocational instructors and curricula.
15. The membership of Teacher Education Center Councils and other Master Inservice Plan Committees should include proportional representation from vocational education. An effort should be made to involve nondegree vocational personnel because of the large percentage of vocational instructors who do not have a college degree.
16. The Department of Education should be assigned responsibility for the development and implementation of a Master Inservice Plan for Vocational Educators which would serve both the school district and community college sectors. The Plan would complement existing local plans and identify areas in which statewide activities are needed. The Plan should be based on a five-year cycle and assure that the needs of personnel in all vocational fields are addressed.
17. To keep pace with inflation and increasing demands for updating due to rapidly changing technologies, the funds earmarked for inservice training in the Florida Education Finance Program should be based on a percentage rather than a specific dollar amount of the base student allocation. The percentage should be increased to .88 percent over a two-year period to

permit adequate preparation for the most effective use of these additional funds. This percentage represents the proportion of the base student allocation earmarked for inservice during the initial years of FEFP.

18. The amount of inservice funds expended for vocational instructors in school districts and community colleges should be continuously monitored by the Division of Vocational, Adult and Community Education and the State Board of Community Colleges as part of each system's program review process to ensure that vocational educators in each sector are receiving at least a proportionate share of staff development dollars, especially for the purpose of technical updating.
19. A greater proportion of the Federal Vocational Act funds available for personnel development should be directed to statewide technical updating in fields with relatively few teachers in which local training is not economically or logistically practical.
20. A majority of the Federal personnel development funds should be used for technical updating and other training activities which earn credit for initial or renewal certification.
21. The 1985-87 budget request for technical updating should be approved and its role in the overall strategy for vocational personnel training clearly described and addressed in the Master Inservice Plan for Vocational Educators.
22. School districts and community colleges should work with business and industry to provide vocational instructors with periodic opportunities for industry-based work experience in their field of expertise. Business and industry should be encouraged to provide matched funding to complement available inservice resources to cover the cost of instructor salaries, substitute teachers and other related expenses.
23. The summer inservice institutes should be expanded to include selected vocational fields. The eligible vocational areas should be designated annually by a statewide committee which includes representation from both vocational education and business and industry.
24. To promote accessibility to university training, state universities should permit vocational instructors to enroll on a special student basis in courses which apply to recertification.
25. In implementing its plan for inservice training, the Department of Education should continue to explore the application of telecommunications and other technology for inservice training purposes. In addition, the Division should work closely with the Office of Teacher Certification to assure that existing and proposed requirements for initial state certification and renewal do not unduly restrict the use of technology for training activities.

The State Master Teacher Program and Salary
Compensation for Vocational Personnel

The master teacher program was enacted by the 1983 Legislature and entitled the "Florida Meritorious Instructional Personnel Program." This program was amended significantly during the 1984 Legislature and was renamed the "State Master Teacher Program". The original 1983 version of the master teacher program required a master's degree in the subject, field, or service area where the majority of the candidate's teaching duties occur. Due to extensive concerns raised by the vocational education community and others, the master's degree requirement was deleted during the 1984 legislative session. The qualifications to participate in the program as an associate master teacher now include four years teaching experience and a professional service or continuing contract; either a master's degree in the appropriate field or a certificate at the vocational level of training, or attainment of a superior score on a subject area examination; superior performance as evaluated by the applicant's principal using a reliable, valid, and normed performance evaluation system approved by the State Board of Education; and the principal is allowed to recommend additional evaluation points for an applicant if he determines that the evaluation system fails to recognize adequately the performance of the applicant.

In general, the vocational education community appears to be satisfied with the new criteria, and believes that vocational teachers who lack a master's and perhaps a bachelor's degree yet excel in the classroom now have a fair opportunity to become master teachers. One concern expressed to the Commission is the requirement that a vocational instructor with a bachelor's degree must attain a master's degree in order to be eligible. The Commission suggests that a complete year of experience with the current provisions be obtained prior to consideration of further modifications or exemptions for vocational instructors. Another concern is that the current Florida Performance Measurement System is not valid for determining teaching effectiveness for vocational educators, and this system should be revised or another reliable and valid performance evaluation system substituted by the State Board of Education for evaluation of vocational educators. The Commission concurs; however, until the FPMS is modified, principals should be encouraged to incorporate additional evaluation points for the vocational educator whose performance is not adequately evaluated by the current evaluation system.

The Commission fully supports the commitment of the State Board of Education to raise teacher salaries and believes that additional incentives are needed to attract and retain competent vocational instructors because of the competition with business and industry. If vocational teaching is not financially attractive, the efforts of this Commission and other groups to improve the quality of vocational education will be restricted.

Recommendation:

26. The Postsecondary Education Planning Commission supports the State Master Teacher Program criteria identified by the 1984 Legislature as being appropriate for the participation of vocational educators.
27. School districts should assure that their salary schedules for instructional personnel take into consideration factors in addition to

traditional criteria such as a college degree, education coursework or years of teaching experience, including criteria unique to vocational educators such as years of occupational experience, subject matter competence, and other appropriate measures.

I. INTRODUCTION

In proviso language accompanying Specific Appropriation 459, the 1984 Legislature directed the Postsecondary Education Planning Commission "to conduct a study of the certification and preparation of vocational education teachers. The study shall include:

- An analysis of the extent to which certification requirements contribute to the shortage of qualified vocational teachers.
- An analysis of the differences in teaching ability between certified and noncertified vocational educators.
- A determination of the adequacy of funding for preservice and inservice training for vocational educators.
- A determination of the adequacy of preservice and inservice training for vocational teachers in terms of availability and content validity.
- A determination of appropriate criteria related to excellence in teaching through which vocational educators may participate in a state merit pay plan, including the role of educational degrees in such criteria."

To direct this study, the Commission designated a Vocational Education Teacher Preparation and Certification Study Committee comprising Rayma Page, Chairman, Michael Butler, Robert Mautz, and Harry Smith. In early meetings, this Committee emphasized the need for practical, realistic recommendations which could be implemented at the state level to ensure quality standards for vocational teacher preparation and certification. Commission staff met initially with staff of the Department of Education's Office of Teacher Certification and Staff Development; the Department of Education's Division of Vocational, Adult and Community Education; the Florida State Advisory Council on Vocational and Technical Education; the Education Standards Commission; the Florida Vocational Association; the Governor's Office and legislative staff to explore the issues involved in the legislative charge.

This study was viewed as a follow-up to the 1983-84 Commission studies of Colleges of Education and Postsecondary Vocational Education in Florida, and the specific language was derived from recommendations of the 1984 (House of Representatives) Speaker's Advisory Committee on Vocational Education. Of primary concern was the belief that the certification and preparation process for vocational education teachers may be discouraging persons in industry with specialized vocational expertise from entering the teaching profession, particularly at a time when vocational training and retraining needs in Florida are increasing.

The certification process for postsecondary vocational education differs by sectors and will be described in detail in Chapter Two. In brief, Florida vocational education teaching certificates are required of instructors in postsecondary vocational education programs which are administered by school districts. Teaching certificates are offered in the fields of business, agriculture, technical, industrial, health, cooperative, distributive, and home economics education representing over 130 discrete areas. It is anticipated

that new areas of certification will be developed as new technologies and support services are developed. Regular, temporary, and part-time certificates are issued to teachers with degrees and to those with no college degrees.

The term "certification" is used differently in community colleges. Vocational education teachers in the community colleges are hired at the discretion of the local boards of trustees and community colleges frequently refer to the criteria they have established for employment as "local certification." In general, community colleges have developed standards for employment based on the SACS standards for faculty and instruction. The Teacher Certification Examination and Beginning Teacher Program are not required for "local certification" to teach in community colleges, and most community colleges do not require education coursework.

Another major concern which initiated this study was the growing realization that vocational educators in both community colleges and school districts may not be up-to-date in the latest technology. Several instructors do not possess the expertise to teach this technology nor is there a uniform, systematic plan in the State for teacher updating in the content area. During recent visits by members of the High Technology and Industry Council to vocational technical centers, representatives of leading Florida industries have been quoted as stating that they would not hire graduates of many vocational education programs because these students are not trained in utilizing state-of-the-art techniques.

Data Gathering Activities

In identifying key issues and formulating recommendations, the Commission considered several past studies and surveys, informational materials, and task force reports which provided a substantial data base for this study. For example, the Florida State Advisory Council on Vocational and Technical Education had completed recently two reports of value to the Committee--Teacher Shortages in Vocational Education (1982) and Evaluation of Inservice Education for Vocational Education Personnel (1983). In June 1984, the Office of the Auditor General released a performance audit of the "Process of Certifying Florida Teachers by the Department of Education," and the Education Standards Commission has proposed changes in the current structure and requirements for teacher certification and recertification. An examination was also made of the requirements for certification and preparation of vocational education teachers in certain other states.

Additional research activities were needed to strengthen the data base. These are outlined below and will be described in detail in Chapter Three:

1. Analysis of Differences in Teaching Ability between Certified and Non-Certified Vocational Educators - In compliance with the legislative charge, trained consultants were hired to observe experienced vocational teachers in both the community college and school district sectors utilizing the Florida Performance Measurement System. Comparisons were made based upon the type of certificate held by the teacher being observed and also between teachers who had less than 20 semester hours of education coursework and teachers with more than 20 semester hours in education.
2. Surveys of Seniors, Recent Graduates and the Employers and Supervisors of these Graduates and Seniors in Preservice Vocational Education Programs -

To study the content validity and availability of preservice vocational education programs, a sample of seniors and recent graduates from four-year vocational education programs in the State University System were surveyed. Supervisors of these teachers were also surveyed and the perceptions of these groups regarding the preservice experience were compared and analyzed.

3. On-Site Visits to Designated Vocational Technical Centers - During the course of this study, visits were made by Commission members and staff to twelve vocational technical centers in seven school districts and four community colleges. Interviews were held with the vocational education directors and other school administrators, and also with vocational instructors. Several additional directors were interviewed by phone and at statewide meetings. During these visits, information was solicited on:
 - The differences in the certification process and qualifications for vocational teachers in community colleges and school districts. Are the two systems necessary? How do the advantages and disadvantages of the two systems compare?
 - The appropriateness of certification requirements to ensure quality teaching (Teacher Certification Examination, proposed subject matter examinations, Beginning Teacher Program, 20 semester hours of professional coursework)
 - Distinct categories for vocational teaching certificates awarded by the State - Are 130 occupational categories needed or do those represent unnecessary proliferation?
 - Preservice education for vocational teachers in Colleges of Education - Are these programs up-to-date and is funding adequate?
 - Inservice opportunities for vocational teachers--training programs to obtain a regular certificate, certificate extension, and opportunities to remain current in a field of specialization; funding for inservice programs.
 - Inservice opportunities for college faculty who train vocational education teachers.
 - The state master teacher program and the participation of vocational education teachers.

Consideration of Recommendations

Because of the legislative calendar and the fundamental question as to whether or not state certification is actually needed for postsecondary vocational instructors, the Commission considered it essential to formulate and disseminate a preliminary draft of issues and recommendations to facilitate public comment before final consideration. Options to the present system of state certification, and a set of preliminary recommendations and accompanying rationale for each were disseminated for public comment on February 4, 1985.

The Committee received public comment on the study and recommendations at a public hearing in Tallahassee on February 20, 1985. Following review of public

comment and the conclusion of the research activities, the Committee modified the report and presented a final report to the Commission on March 21, 1985 for adoption and transmittal to the Legislature and State Board of Education by April 1, 1985.

II. THE CERTIFICATION AND PREPARATION OF VOCATIONAL EDUCATION PERSONNEL

The certification process for postsecondary vocational education teachers in school districts differs from those in community colleges. The State requires Florida vocational education teaching certificates for instructors in postsecondary vocational education programs which are administered by school districts. In 1973, the Florida Legislature deleted the requirements that community college faculty be certified by the State. However, the State Board of Education rule requiring state certification for community college personnel remained in place until 1978. Since that time, vocational instructors in the 14 area vocational education schools administered by community colleges as well as vocational faculty throughout the community college system have been certified at the discretion of the local boards of trustees. This chapter will examine the differences in certification and recertification requirements and instructor preparation between the two sectors.

State Certification of Vocational Education Teachers in Florida's School Districts

State teaching certificates are offered to vocational teachers in the fields of business, agriculture, technical, industrial, health, cooperative, distributive and home economics. These are broad areas representing over 130 distinct categories in vocational education for which state certification is available (see Appendix A). For the purpose of state certification, vocational educators are classified by educational level: degree (e.g. agriculture, home economics) and non-degree (e.g. industrial, trade, and health areas). Certification requirements for the degree vocational teachers are very similar to those for academic area teachers of science, mathematics or English. These requirements include graduation from a state-approved teacher education program at a college or university or a course transcript verification that the necessary education and academic requirements have been completed during the undergraduate program. A temporary certificate can be awarded annually for three years while the candidate completes the necessary 20 semester hours of education coursework (6 hours per year) and other certification requirements such as the Florida Teacher Certification Examination and Florida Beginning Teacher Program.

For the non-degree vocational educator, minimal academic and occupational requirements include a high school diploma or a state board-approved equivalency and six years of full-time employment, with six weeks in the last five years. Nine "equivalent" combinations of academic degrees, certificates, earned hours of college credit, licenses, and years of work experiences less than six are acceptable in lieu of some of the qualifying work experiences for the non-degree candidate. If the non-degree candidate has met these minimum requirements, an initial temporary certificate is issued for a period of one year. The temporary certificate can be renewed for five years if regular progress is shown towards completing the required 20 semester hours of education coursework (at least 3 hours per year), and the additional requirements of passing all sections of the Florida Teacher Certification Examination and successfully completing Florida Beginning Teacher Program.

The 20 semester hours of educational coursework must include 3-6 hours in sociological or psychological foundations of education or secondary school curriculum, and 14 hours of vocational education courses, including a course in

the foundations of vocational education, teaching techniques in vocational education, and special methods of agricultural, distributive, industrial education depending on the area of certification. A regular certificate for the non-degree vocational teacher requires three years of full-time teaching experience in vocational education, a passing score on the Florida Teacher Certification Examination, and successful completion of the Florida Beginning Teacher Program. According to the Department's Office of Teacher Certification, over three-fourths of all vocational education certificate applicants first receive temporary certificates.

Part-time certificates are also offered to vocational educators who teach less than 451 hours in a public school. A part-time certificate applicant must satisfy the minimum occupational requirements, and the application must be accompanied by a request from the district school superintendent. Educational coursework, the Florida Teacher Certification Examination and Florida Beginning Teacher Program are not required to obtain a part-time certificate.

Statistical data on the numbers of certificates which the state has offered in vocational education as compared to regular academic areas are contained in Table One and Figure One.

Florida Teacher Certification Examination

Since July 1980, candidates for the Florida teacher certificate have been required to demonstrate through a written examination, mastery of the essential competencies adopted in state board rules (Section 231.17, Florida Statutes). The Florida Teacher Certification Examination (FTCE) consists of two major components: a basic skills component consisting of three subtests (writing, reading, and mathematics) and a professional education component. The entire examination takes approximately five hours to complete. Statistical data on approximately 16,000 candidates who took the examination after August 1981 indicate that the average percentage of candidates passing each subtest is: writing, 92 percent; mathematics, 87 percent; reading, 90 percent; and professional education, 94 percent. A candidate must pass all four subtests to pass the examination. The overall passing rate for all candidates is about 83 percent. The 1983-84 Postsecondary Education Planning Commission's Study of Colleges of Education and the 1982-83 Report of the Joint Executive and Legislative Task Force for Teacher Education Quality Improvement criticized the current FTCE as not being rigorous.

In 1983, a study on the certification requirements for non-degree vocational teachers was released by the Florida State Advisory Council on Vocational and Technical Education (in conjunction with a doctoral dissertation by Brenda Fernandez). The study stated that when non-degree vocational education candidates were isolated from all candidates for a teaching certificate, only 51 percent of the non-degree candidates passed all four subtests of the FTCE. According to S.231.17, F.S., non-degree vocational teachers are allowed a three-year period to successfully complete the four subtests of the FTCE, rather than the one year required of degree candidates.

TABLE ONE

FLORIDA TEACHING CERTIFICATES ISSUED

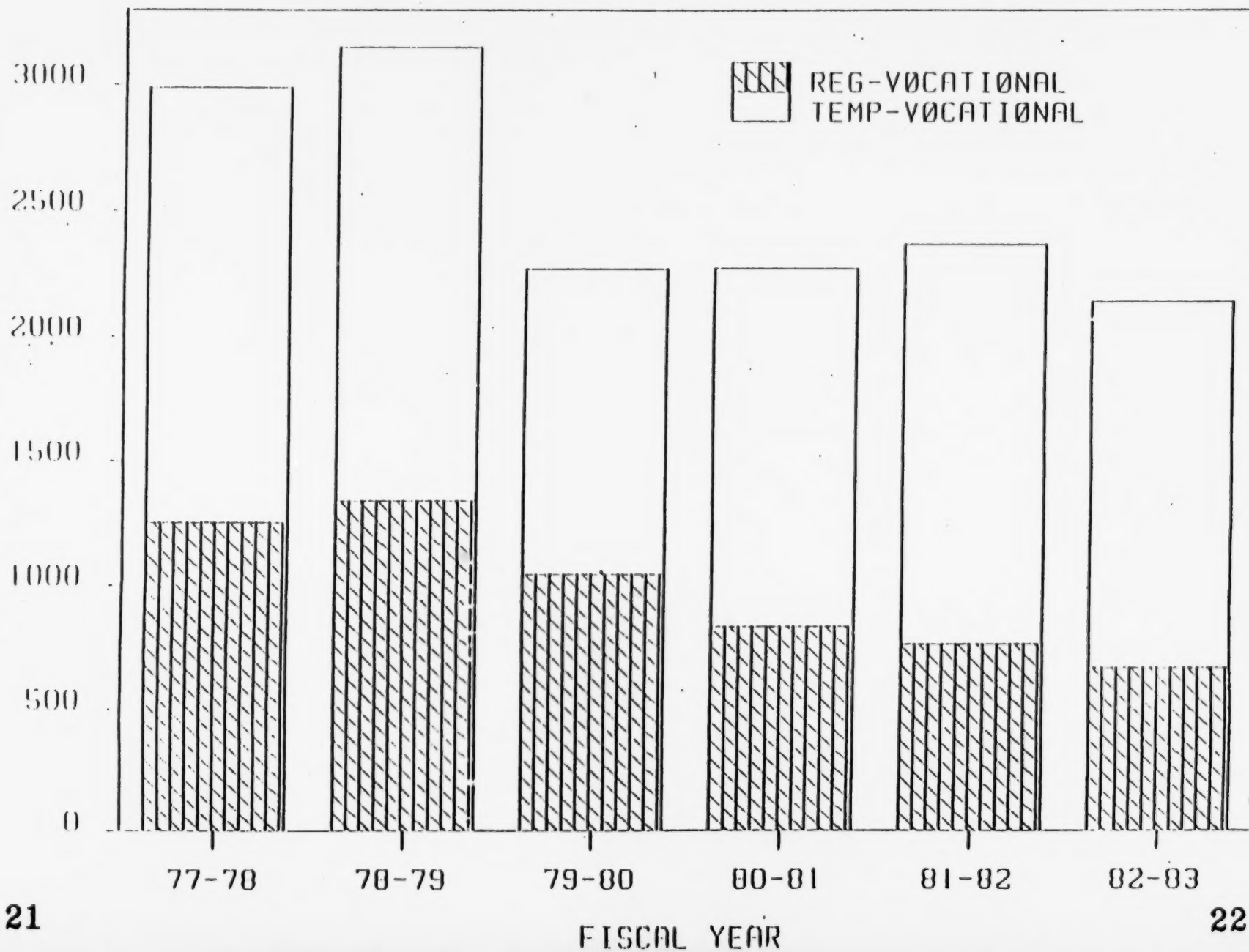
Total number of certificates issued by type and total number of certificates issued for the last twelve (12) years.

FISCAL YEAR	REGULAR ¹	VOCATIONAL ²
1972-73	25,687	4,225
1973-74	27,968	4,703
1974-75	29,411	5,398
1975-76	25,645	4,832
1976-77	25,016	4,424
1977-78	24,182	4,237
1978-79	26,158	4,480
1979-80	23,132*	3,312*
1980-81	19,913	2,905
1981-82	21,252	3,123
1982-83	19,840	2,929
1983-84	18,572	3,385

*Decrease because state certificates were no longer required to teach in Florida's Community Colleges after 1978.

1. Includes all initial full-time certificates and reissued temporary certificates in academic areas.
2. Includes full-time and part-time vocational certificates. (degree and non-degree)

FIGURE ONE
REGULAR-VOCATIONAL AND TEMPORARY-VOCATIONAL
CERTIFICATES ISSUED FROM 1977 TO 1983



As part of the Advisory Council study, a national survey of teaching requirements for non-degree vocational certification was conducted. The survey identified three other states (Arizona, California, and South Carolina) which require their non-degree vocational teachers to pass the same examination as degree teachers.

The FCTE results of 590 non-degree vocational candidates since November 1980 were included in the study. These results are displayed in Table Two.

TABLE TWO
FTCE RESULTS OF NON-DEGREE VOCATIONAL CANDIDATES

FTCE Candidates					
#	Total %	Passed #	Passed %	Failed #	Failed %
590	100.0	286	48.5	304	51.5

The Florida State Advisory Council on Vocational Technical Education recommended that "every effort should be made to insure that the FTCE continues to be a requirement for non-degree vocational teachers if it continues for degree teachers. To condone a lesser standard for non-degree vocational teachers would effect an undermining of their status as professionals." The Council further recommended that test preparation programs be offered to non-degree candidates to assist in developing the necessary basic skills and competencies needed to pass each of the four subtests of the FTCE.

An additional variable in the process of measuring basic competencies is the College Level Academic Skills Test (CLAST) which is administered to sophomores in Florida institutions of higher education. A satisfactory score on the CLAST examination is now required for the award of an AA degree and for admission to the upper division in a Florida public university. The Commission's Study of Colleges of Education recommended that the basic skills components of the CLAST should be compared to those of the Florida Teacher Certification Examination (reading, writing and mathematics subtests). The results of this analysis should be available in June 1985. If the competencies measured by the CLAST are found to be at an equal or higher level, then the CLAST should be substituted for the basic skills component (reading, writing, mathematics subtests) of the Florida Teacher Certification Examination. Candidates who have passed the CLAST or an equivalent measure of basic skills previously should be exempt from the basic skills section of the Florida Teacher Certification Examination. It is questionable whether a college level basic skills test should be required of a vocational educator who holds only a high school diploma.

Florida Beginning Teacher Program

The Florida Beginning Teacher Program was established by legislative action in 1981. The statute requires that all candidates for a teaching certificate in

Florida, including all degree and non-degree vocational educators, must also satisfactorily complete a year-long Beginning Teacher Program. The primary purpose of the Beginning Teacher Program is to improve the performance of all first year teachers through a comprehensive program of support, training, and documentation of fundamental teaching competencies such as planning, presentation of subject matter, communication and student evaluation. A school district conducts the program during an individual's initial year of employment in which the participant receives full pay. According to S.231.17, F.S., satisfactory completion of the Beginning Teacher Program requires the superintendent to verify that the beginning teacher has completed the program successfully.

To verify the demonstration of these generic teaching competencies through comprehensive evaluation processes, the Florida Performance Measurement System (FPMS) has been developed by a coalition of representatives from Florida school districts and universities. The measurement system provides standardized procedures for conducting observations and performance evaluations of beginning teachers to ensure consistency within the State. The system is based upon recent empirical research on effective teaching and is used in all school districts with the exception of Dade County in which a similar system, the Teacher Assessment and Development System (TADS), has been approved for use.

Alternative Program Approval Standards for Vocational Teachers

Program approval of teacher education programs is the process used by the Department of Education to verify that a teacher training institution has designed and can document a complete teacher training program with admission, screening and exit requirements specified. A curriculum designed to include Florida's generic teaching competencies must be verified and evaluation procedures specified in the program for determining that those who complete the program satisfactorily demonstrate all required competencies.

Since 1974, alternative program approval standards have been adopted by the Department of Education to meet the needs of vocational teachers and alternate programs for vocational educators have been implemented in Dade, Pinellas, and Broward school districts. An example of the Pinellas County model, the Training Vocational Teachers (TVT) Program, follows.

The TVT Program in Pinellas County was developed to prepare and certify vocational teachers who are employed directly from business and industry and others who lack education coursework. The program was started in 1974 to provide an alternative to the 20 semester hours of education coursework at the university. The program is field-based and originally provided three weeks of intensive training to novice teachers before the opening of school. This training period has now been reduced to 40 hours and takes place during the first two weeks of school because of high costs of the pre-school model. The program emphasizes the support and involvement of peer teachers and small group instruction. In the past, the program was funded through the federal vocational education block grant; however, current funding is provided through Pinellas County Teacher Education Center funds.

According to Pinellas school district personnel, the basic principles underlying the program are:

1. Successful practicing teachers make the best instructors for new teachers.
2. Teachers learn best in actual classroom or shop situations.
3. The only means of validating a competency-based teacher education program, is to assess the teacher's performance on the job.
4. Current teachers are key elements in any teacher education program.
5. All teaching competencies are dependent upon the teacher's ability to motivate in terms of being able to demonstrate, explain, guide, counsel, direct, control, and lead by example.

The program has state approval from the Department of Education. TVT originated as a one-year program of 160 hours but was expanded to two years due to the state certification requirement that the hours be equivalent to 20 semester hours of education coursework. Thus, 300 hours are now required over a two-year period for the non-degree vocational education program participants. Participants meet in the evening for three hours twice a month throughout the year. At the close of the regular school year, a review workshop is held for three days. During the first year, novice teachers work closely with assigned directing teachers. For the second year, participants meet four times in seminars. Successful completion of the course involves satisfactory annual evaluations by the principal or director for both years.

The program is competency-based in that participants learn and demonstrate the actual skills, knowledge and attitudes of teaching. The program is in its tenth year in Pinellas County and over 150 graduates are presently teaching in the school district. Since 1982, the TVT Program in Pinellas County has been conducted as a cooperative program with the University of South Florida. One advantage of this linkage is that participants are able to secure course credit from USF towards a college degree and therefore obtain a higher salary from the school district. Another advantage is that through the involvement of a university faculty member, the TVT activities have been prescribed to accommodate the improvement of deficiencies identified by the support staff in the Beginning Teacher Program. The correlation between the TVT and the Beginning Teacher Program are key features in the training program. The program also contains a refresher course to prepare participants to take the Florida Teacher Certification Examination. Pinellas County officials stated that during 1983-84, 100 percent of these TVT program participants passed the state examination. A disadvantage of the modified program identified by the program participants is that the training activities are not as relevant to the classroom needs of the teachers as they once were without the involvement of the College of Education. Table Three describes the current TVT structure as compared to the standard method of a certification for non-degree vocational educators.

The Committee held its November meeting at the Pinellas Vocational Technical Institute. While at the Institute, Committee members interviewed several instructors who had completed the TVT Program. These instructors praised the TVT Program as being essential for the non-degree vocational educator who had no previous teaching experience.

TABLE THREE
NON-DEGREE CERTIFICATION FOR
VOCATIONAL PERSONNEL IN PINELLAS COUNTY

PINELLAS COUNTY TVT PROGRAM	STANDARD ROUTE
- 6 years experience in trade	- 6 years experience in trade
- TVT Program:	- 20 semester hours in education coursework in:
300 hours over 2 years:	Philosophy of Education Techniques
1. 40 hr. survival skills during first 2 weeks of school.	Special Methods
2. 260 hrs. over 2 years in five courses:	Educational Psychology
a. curriculum construction	Elective(s) in Vocational Education
b. program management	- 3 years of successful teaching experience
c. principles of vocational education	- passing score on the Florida Teacher Certification Examination
d. techniques	- successful completion of the Florida Beginning Teacher Program
e. special methods	
- 2 years of successful teaching experience	
- passing score on the Florida Teacher Certification Examination	
- successful completion of the Florida Beginning Teacher Program	

One problem with the alternate program approval process identified by district personnel in Leon County is the inflexibility of the state's program approval standards. For example, the Office of Teacher Certification in the Department of Education requires that the TVT program contain clearly defined admission requirements, sociological and psychological foundations courses, and a matrix to correlate the courses or components taught for each certification area to 20 semester hours. The inservice director for Leon County stated that this special training program in Leon County was terminated because of the revised requirements established by the Department of Education for state program approval.

Proposed Changes in State Certification

In July 1983, the State Board of Education directed the Education Standards Commission (ESC) to review current State requirements for teacher certification and certification extension. The ESC report on certification was released in October 1984 and included several recommended changes in the area of vocational and education certification. The distinct certification categories for vocational educators would be reduced from over 130 to nine: agriculture,

agriculture occupations, business office occupations, diversified occupations, health occupations, home economics occupations, industrial arts, industrial occupations, and marketing/distributive occupations. The temporary degree certificate would be valid for two years and non-renewable. The temporary non-degree certificate for vocational personnel would be valid for two years and renewable once. The following conditions were proposed by ESC for the non-degree vocational educator:

1. Document six years of successful work experience and/or the appropriate professional license acquired during the last ten-year period in the field in which certification is sought.
2. Document evidence (within one year of receipt of the temporary certificate) of an acceptable score on an occupational test approved by the State for the field in which certification is sought or successful performance on a state-approved competency examination.
3. Verification of an acceptable score on the CLAST examination or its equivalent.
4. By the conclusion of the second temporary non-degree certificate, the individual must demonstrate evidence of receipt of an acceptable score on the professional section of the Florida Teacher Certification Examination.

During 1984-85, the statutes governing certification are being reviewed by the Legislature pursuant to S.11.61, F.S. (Regulatory Sunset Act). Subsequent to the sunset review of the statutes, the State Board of Education rules on certification and certification extension will possibly require substantial revision. The recommendations of the Education Standards Commission to the State Board of Education and, also those of other coordinating and advisory boards, are being considered during this modification period.

Recertification for School District Personnel

Current certification policy requires that state teaching certificates be renewed every five years through completion of six semester hours or the equivalent (120 clock hours) of approved inservice components. In addition, the state board rule governing the process (Rule 6A-5.71 FAC) states that at least half of this work be in the field in which the applicant is certified or seeking certification. Up to three semester hours (60 inservice hours) may be earned out-of-field in the areas of administration, guidance, exceptional child education and basic skills. All courses used for recertification purposes must be approved by the Department of Education. A course check sheet is developed for each college and university showing which courses can be used for the certification process, including an identification of courses that may be used for in-field credit.

School district inservice activities are frequently used for certification renewal. Forty-one percent of the teachers surveyed in the Education Standards Commission's 1983 Teacher Education Center Evaluation Study reported that they had renewed certificates through inservice activities. Almost half of the teachers noted a preference for obtaining recertification through inservice programs instead of university course credit.

The Education Standards Commission has also examined the recertification procedures and requirements at the request of the State Board of Education. The October, 1984 ESC report recommends that the state certificates be issued every five years. The recommended requirements for renewing a certificate are:

- (1) The successful completion of at least six semester hours (or 120 inservice credits) with at least three semester hours of coursework in each area of specialization listed in the certificate.
- (2) The demonstration of satisfactory performance on the summative evaluation of a state-approved performance measurement system.

With the exception of Item (2) above, the proposed requirements are similar to current practices in certification renewal. Problems are being experienced in vocational education in the area of technical updating and these concerns will not be eliminated or reduced with the modifications suggested by the Education Standards Commission. For example, to renew a certificate, a teacher must complete three hours in any specialization area. However, an electronics teacher who takes a three-hour course in educational evaluation or teaching methods during a five-year period will be eligible to have his certificate renewed. No technical updating courses are required now; nor under the changes being proposed by the Education Standards Commission.

Local Certification in Community Colleges

Since 1978, state certification has not applied to community college instructors. Instead, local boards of trustees are authorized to adopt selection, development, evaluation, and retention procedures based on instructor performance. Accountability is through State Board of Education rules against which the boards of trustees conduct self-studies under the review and evaluation of the State Board of Community Colleges and report to the Commissioner and the State Board of Education.

In general, the standards of the College Delegate Assembly of the Southern Association of Colleges and Schools (SACS) on Faculty and Instruction are the foundation upon which the colleges have developed certification criteria. These standards for instructors of vocational education are usually different than those which exist for community college personnel teaching in academic areas. The standards for vocational educators state, "In specialized, professional, technical, or vocational fields, evidence of professional competency is acceptable in lieu of normal academic preparation. This competence may be based upon appropriate specialized training or successful experience as a practitioner in the occupational field."

There are 14 community colleges with a department designated as an area vocational education school by the State Board for Vocational Education. The following general summary of requirements for non-degree vocational education instructors in designated area vocational schools was provided by staff of the State Board of Community Colleges based on a Fall 1983 survey:

- (1) Minimum of a high school diploma or equivalent, evidence of coursework (15-30 semester hours), seminars and at least 3-6 years employment in field, two of which shall be at the skilled or journeyman level. A

bachelor's degree or master's degree with 15-20 semester hours in field is required by some institutions.

- (2) Occupational competency may be acceptable in lieu of formal academic preparation.
- (3) The President may authorize appointments based on substitution of background or experience deemed equivalent, for the purpose of the position, to the specified academic preparation.
- (4) Applicants must possess current license or certification when seeking employment in areas where the profession is regulated by a State or National regulatory agency.

An analysis of the individual standards being used by each community college revealed that, in general, neither a degree in education nor coursework in education is required. No state level standard exists which applies to all community colleges. A review of individual criteria indicate that a bachelor's degree in the major vocational area may be required; however, this degree does not have to be in education. For example, the bachelor's degree can be an arts and science degree in agriculture, not agriculture education. Thus, with regard to education coursework, the community college criteria for instructors are no different in the vocational areas than in the academic areas. An arts and science graduate in mathematics has been able to teach at most community colleges without a degree in mathematics education or required education coursework. In all vocational areas, however, occupational experience is clearly a requirement.

Professional Development

According to staff of the State Board of Community Colleges, each community college has established a professional development program that is designed to contribute to the career development of vocational education teaching faculty. After initial certification, vocational faculty must complete a professional development program. The program encompasses a cluster of activities recognized as supportive of the professional growth of the instructor. The instructor is expected to complete the program prior to the expiration of the initial certificate and meet the requirements of Rule 6A-14.411, FAC prior to being awarded a continuing contract. In order to be eligible for recertification, a vocational instructor must complete one or more of the following activities: prescribed coursework; workshops/seminars; publication of articles, books, or professional presentations; exchange teaching; development of grant proposal; participation on an accreditation team or committee; or full-time work experience on a leave of absence. A quantitative index is placed on each activity for evaluation purposes. The college credit or continuing education units are earned either in the subject area of employment, related areas, general education, or professional growth. State Board of Education Rule 6A-14.29, FAC, requires each college to allocate each year a sum not less than two percent of the previous year's allocation received from the Community College Program Fund for Staff and Program Development (SPD). SPD funds are then spent according to a local plan developed to enhance the professional competencies of faculty. In addition, colleges are given an opportunity to participate in follow-up and evaluation projects that are designed to bring vocational faculty and employers together for the purpose of determining

curriculum needs as well as entry level employment skills needed by program graduates. Faculty are also encouraged to attend workshops and seminars offered by such groups as the American Vocational Association, the Occupational Education Commission of the Florida Association of Community Colleges and the annual inservice education workshop cosponsored by the Division of Vocational, Adult and Community Education. An analysis of the 1979-80 staff development efforts in community colleges for vocational education faculty appears on page 54.

III. RESEARCH ACTIVITIES ASSOCIATED WITH THE STUDY

During the past decade, several groups in Florida have examined vocational teacher education and certification. Numerous studies have been conducted and reports written and disseminated. To avoid redundancy, the Commission reviewed the findings and conclusions of these previous efforts before designing the research activities of the current study. The strategies incorporated in the Commission's Study of Vocational Teacher Preparation and Certification solicited data in areas which had not been investigated previously. Research activities included:

- A. An analysis of the differences in teaching ability between certified and non-certified vocational educators (as directed in proviso language).
- B. An examination of Preservice Vocational Education Programs in terms of
 - 1. content validity and availability, and
 - 2. the adequacy of funding.
- C. On-site visits to designated Vocational Technical Centers and Schools.

A. Analyzing the Differences in Teaching Ability
Between Certified and Non-Certified Vocational Educators

One component included in the proviso language accompanying Specific Appropriation 459 on the study of the certification and preparation of vocational education teachers called for "an analysis of the differences in teaching ability between certified and noncertified vocational educators." This specific language was included in the report of the 1983-84 Speaker's Advisory Committee on Vocational Education. Further clarification from those who had participated on this committee revealed that the issue in question was a comparison of the difference in teaching ability between vocational educators certified by the state and employed by school districts (state-certified), and those certified by a local board of trustees and employed by community colleges (non-state certified).

A performance measurement system has been developed and implemented as part of Florida's Beginning Teacher Program. This system provides standardized procedures for conducting observation and performance evaluation of beginning teachers. The Florida Performance Measurement System (FPMS) incorporates knowledge derived from empirical research on effective teaching into categories of teaching behavior for standardized evaluation. College faculty, school administrators, peer teachers, and other educators in school districts and universities throughout Florida have been provided extensive training over the past two years utilizing the instruments designed for the evaluation of beginning teachers.

A norming study of the FPMS summative observation instrument was completed recently and the results indicate that this instrument separates effective teachers from ineffective teachers in certain ethnic groups, experience levels, education levels, and types of student groups. The results of the norming study indicate that the FPMS summative instrument is a valid and reliable means to determine teacher performance, and the instrument has also been approved by the State Board of Education for observing candidates for the state master teacher program.

The FPMS appeared to be the most appropriate instrument to analyze the differences in teaching ability between state-certified and non-state certified vocational educators, although the FPMS has been used only to observe teacher performance in school districts. Permission for observing vocational educators by use of the FPMS was requested from administrators in school district and community college vocational technical centers and schools selected for participation in this study.

Research Design

The Commission contracted with faculty members trained in the use of the FPMS in three strategic locations in the State (Southeast, Central, and Northwest). Individuals were required to observe vocational educators in community colleges and school districts for a full teaching period each in their geographical area utilizing the FPMS summative evaluation instrument. The instruments were sent for processing and analysis to the University of South Florida which is the designated center in the state for FPMS analysis. In addition, vocational education deans and directors were asked to rate each instructor being observed as outstanding, satisfactory or in need of improvement.

Sample

Seventy-four full-time teachers with more than one year teaching experience (and six years of occupational experience) in community colleges and school districts were observed for the purpose of this study. This included 43 vocational education teachers in five area vocational centers administered by school districts and 31 vocational instructors in four designated area vocational education centers in community colleges. Observations of vocational education teachers were limited to five categories of auto body, auto mechanics, welding, electronics, and air conditioner and heating mechanics.

Results

Several analyses were made of the data by the University of South Florida Teacher Evaluation Assessment Center. These included:

Analysis #1

Community college personnel and school district personnel were compared utilizing independent mean t tests of the total instrument scores, total positive scale scores, total negative scale scores, and individual domain scores. The total instrument comparisons are contained in Table Four.

TABLE FOUR
COMPARISON OF FPMS TOTAL INSTRUMENT SCORES FOR
COMMUNITY COLLEGE AND SCHOOL DISTRICT PERSONNEL

	MEAN	STANDARD DEVIATION	MINIMUM SCORE	MAXIMUM SCORE
Community College Personnel N=31	61.5	4.6	55	74
School District Personnel N=43	60.1	4.4	54	70

Analysis #2

A comparison was made of the 74 teachers based on whether the teacher held a regular state teaching certificate, a temporary state teaching certificate, or no state certificate. In this analysis, it is important to note that several community college vocational instructors are certified by the state; most of these teachers became certified before state certification requirements were deleted for community college personnel.

An analysis of variance was made of the total instrument scores, and individual domain scores for this comparison. The results of this comparison are displayed in Table Five.

TABLE FIVE
COMPARISON OF REGULAR STATE CERTIFICATION, TEMPORARY
STATE CERTIFICATION AND NO STATE CERTIFICATION OF 74
TEACHERS USING THE FPMS TOTAL INSTRUMENT SCORE

	MEAN	STANDARD DEVIATION	MINIMUM SCORE	MAXIMUM SCORE
Regular State Certification n=27	59.8	4.3	54	68
Temporary State Certification n=31	61.1	5.0	55	74
No State Certification n=16	61.6	3.8	57	71

Analysis #3

A comparison was made of scores of those vocational teachers who had taken 20 semester hours (or more) of required coursework in education to those who had taken less than 20 semester hours of education coursework. Independent mean tests were conducted of the total instrument score, individual domain scores, and positive and negative scale scores. The total instrument score comparison is contained in Table Six.

In each of the three analyses described above, no significant differences were found. The limitations which must be placed on any interpretation of these findings are discussed in the general comments following the final analysis conducted on the data.

TABLE SIX
A COMPARISON OF TEACHERS BASED ON EDUCATION COURSEWORK
TAKEN USING TOTAL FPMS INSTRUMENT SCORE

	MEAN	STANDARD DEVIATION	MINIMUM SCORE	MAXIMUM SCORE
Education Coursework (20 Semester Hours or more) n=55	60.7	4.6	54	74
Education Coursework (Less than 20 Semester Hours) n=19	60.9	4.4	55	71

Analysis #4

A correlation was made of the individual FPMS total scale score of the 74 teachers to the rating which was given each of them by their administrators prior to the observations. The administrator's rating was limited to the three discrete values of outstanding (3), satisfactory (2), or in need of improvement (1). A calculation using the Pearson Product-Moment Correlation Coefficient between the administrator's rating and FPMS total score yielded a value of 0.09 which was not statistically significant ($p=0.45$).

An analysis of variance was also utilized to answer the question "Is the average FPMS score obtained by teachers receiving an outstanding rating different from that obtained by teachers receiving a satisfactory rating and so on?" The three groups of teachers (Outstanding, Satisfactory, In need of improvement) showed no significant difference in FPMS total scores although the trend of the group means is in the right direction (59.5, 60.7 and 61.03 with ratings of 1, 2, 3 respectively).

General Comments

The conclusions which can be drawn from this research are limited due to the small sample size, the lack of a clear differentiation between community college and school district personnel since many of the college instructors are currently or were previously state certified, and the lack of control for such variables as class size, salary levels and other working conditions. Also, during the course of the study concerns were raised about the validity of the FPMS in vocational lab situations since the measurement system was designed primarily for use with expository instruction or lecture presentations rather than the individualized approach often used in vocational courses. A recommendation for FPMS modification as the result of this analysis and other supporting data is contained in Chapter Four.

B. Preservice Vocational Education Programs

1. Content Validity and Availability

One component of the legislative charge to the Commission called for an examination of preservice training in Florida for vocational teachers. To facilitate this aspect of the study, the Commission contracted with the Center for Studies in Vocational Education to determine the adequacy of preservice teacher education for vocational personnel in terms of availability and content validity. It should be noted that most vocational education teachers do not complete traditional four-year preservice education programs; many vocational teacher certification categories do not require a college degree and within the categories requiring a college degree, some enter teaching from business and industry and may possess liberal arts and science degrees. Thus, this investigation of preservice vocational education examined the preparation of less than 20 percent of the vocational teachers hired by school districts. Approximately 500 new vocational teachers are hired each year; in 1984-85, 58 seniors were enrolled in preservice vocational education programs in Florida and in 1983-84, 102 vocational teachers graduated from these four-year preservice vocational education programs.

Population of the Study

The population for the study consisted of the vocational education faculty in eight state universities which offer preservice vocational education programs; 1983-84 graduates and 1984-85 senior students in these programs; and the supervisors of these students when they participated in the beginning teacher program. The number of the subjects in each category was:

senior students and graduates	160
faculty supervisors	28
supervisors in beginning teacher program	35
Total population	<u>223</u>

Instrumentation

To achieve the goals of this study, two survey instruments dealing with content validity and availability of preservice vocational education programs were developed. The first questionnaire (see Appendix B) was designed to collect information from preservice vocational education university supervisors and supervisors of the Florida Beginning Teacher Program. The university faculty were required to respond to all of the questions, while the Beginning Teacher Program supervisors were required to respond to selected questions. The second questionnaire (Appendix B) was designed to collect information from graduates and senior students of preservice vocational education programs.

Procedure

A letter was sent to the contact persons for vocational education at each of the nine state universities requesting the following information:

- a. Name, address, and telephone number of supervisors of preservice vocational education programs in the university.

- b. Name, address, and telephone number of 1983-84 graduates of preservice vocational education programs in the university.
- c. Name, address, and telephone number of 1984-85 senior students of preservice vocational education programs in the university.
- d. Name, address, and telephone number of supervisors of beginning teacher program for these graduates and students.

Three days after the mail out, telephone calls were made to request the release of the requested information. From the initial nine state universities, eight state universities released the information available to them. Florida A & M University failed to provide any of the requested information. Except for the University of West Florida which provided complete placement records for their graduates, none of the state universities could provide the names and addresses of the supervisors for beginning teacher programs.

After securing the contact information, appropriate questionnaires were mailed. Two weeks after the mail-out, follow-up letters requesting completion and return of questionnaires were sent to subjects who failed to return the questionnaires. The percentage of returned questionnaires was considerably low even after the follow-up letters. Thus, the non-respondents were contacted by phone. This group of subjects responded to the questionnaire verbally, and their responses were recorded on the appropriate questionnaire.

Data Analysis

From the 160 questionnaires mailed to senior students and graduates, 39 questionnaires were returned as undeliverable. Thus, the number of subjects in this category was decreased to 121. Also, the number of subjects in the category of "beginning teacher program supervisors" decreased to 33 due to the fact that two supervisors were no longer teaching at those schools.

The low number of beginning teacher supervisors was due primarily to lack of information provided by state universities. A few beginning teacher supervisors were identified by phoning students. As a result, the data on beginning teacher supervisors mainly reflect the perspectives of the supervisors of the West Florida students. Also, a few supervisors were in charge of supervising students of Florida State University and Florida International University. The limitation of time prevented further efforts to identify more supervisors in this category.

The response rate for students and seniors was 42 percent. The response rate for faculty supervisors and beginning teacher supervisors was 75 percent and 77 percent respectively.

The data were analyzed by using accepted statistical procedures. Frequencies and percentages for each category of population was determined. Percentage of responses for each category and each questionnaire item are reported in Appendix B.

Student Questionnaire

The majority of students stated that they were provided with information, orientation, and printed orientation materials about the preservice vocational education programs. Most students reported that courses were scheduled

throughout the day and were located in safe and convenient locations. Few students showed concern about the safety and convenience of location for handicapped students. Only 40 percent of students were aware of any additional degree programs which have been added in the past five years in response to high technology demands. The majority of students felt that there were a sufficient number of preservice programs at public universities in Florida. In regard to content validity of the preservice vocational education programs, most students indicated that there was a good balance between courses offered in professional education and those offered in skill content areas. A high percentage of students were not aware of any changes that have been made in the program content to comply with demands of high technology. Over 50 percent of students reported that the programs used the competency-based mapping materials developed by the State and they were taught how to utilize these materials.

Most students (94%) believed that the length of the internship experience was more than adequate or adequate. In addition over 60 percent of the students reported that they have some contact with business and industry in conjunction with coursework during their junior and senior years. When asked what improvements could be made to the content of the preservice vocational education programs, students suggested that they would benefit from more computer courses, contact with industry, and updated equipment and courses. Few students suggested that they needed more courses in the skill content areas.

Faculty/Supervisor Questionnaire

In regard to availability of preservice vocational education programs, faculty supervisors indicated that students were provided with information about the program through orientation sessions, and printed orientation materials. Over 50 percent of the faculty supervisors reported that students encountered some obstacles during the application admission to the program. However, further information provided by the faculty revealed that the problem is the length of time for processing paperwork for admission of the students. Only 58 percent of the faculty gave indication of changes in recruitment strategies. The majority of faculty supervisors indicated that courses were scheduled throughout the day, were offered frequently, and were located in safe and convenient locations. Few faculty indicated that handicapped students may have problems with locations of classrooms, labs, and auxiliary areas.

Most faculty reported that a sufficient number of preservice programs exist at public universities. However, few faculty supervisors knew of additional degree programs which have been added in the past five years in response to high technology. With regard to content validity, faculty supervisors indicated that changes have been made in the content of the programs to update the curriculum and to comply with the demands of high technology. Faculty supervisors reported the addition of courses such as technology and education, applied computers in vocational education, computer literacy, and word processing.

While some faculty supervisors reported that their programs were competency-based and state-developed mapping materials were used in the program, the majority (95%) indicated that either mapping materials were not used in the program or they were not familiar with mapping materials. Also, in most cases, the mapping and competency-based materials were not updated during the last three years.

A high percentage of faculty supervisors (85.7%) believed that there was a good balance between the professional education and skill content areas. Only 33.3 percent of the faculty supervisors indicated that their program did not have an advisory committee. However, all indicated that they were in process of establishing an advisory committee. The programs which had an advisory committee had representatives from industry, school districts, and students, and 42.8 percent said the advisory committee was involved in design of the program curriculum.

While the majority of faculty supervisors reported that they have been provided with opportunities for inservice trainings such as attending workshops and professional conferences, 90.5 percent indicated that the program did not have an exchange program with business and industry for the faculty. Most faculty supervisors believed that the length and quality of internship experience for students was adequate. The supervisors also felt that their students performed better on the Florida Teacher Certification Examination than those who enter teaching directly from business and industry. However, this was not verified during the current study.

Faculty supervisors reported that the following improvements should be made in the content of the preservice vocational education programs:

- Require more competencies in mechanical skills
- Establish computer orientation labs and computer courses
- Provide more field experience
- Furnish updated equipment
- Receive more information from the Department of Education regarding changes in teacher education
- Promote more involvement of students in business, industry and agencies to improve skills for the teaching of vocational education
- Update curriculum and faculty in areas of changing technology.

The majority of the Beginning Teacher Program supervisors in this category indicated that they were not aware of any additional degree programs which have been added in the past five years or changes in the curriculum in response to high technology.

Most beginning teacher supervisors believed that the length and quality of the internship experience for students were adequate, with only 22.7 percent reporting that the length of the internship experience was less than adequate. The beginning teacher supervisors suggested that addition of more courses in the skill content areas, and courses in management skills could improve the quality of preservice vocational education programs.

General Comments

The data indicated that some of the preservice vocational education programs are not using competency-based concepts and curriculum mapping materials. This suggests a need for ensuring that such concepts/materials be used in the training of teachers in preservice vocational education programs. There is also an apparent need for further involvement of advisory committees in design of the program curriculum. In addition, more computer courses and courses in the skill content areas should be included in the curriculum of the preservice vocational education programs.

The data analysis revealed that there is a lack of faculty exchange programs with industry. In addition, both faculty and students reported that to improve the quality of the preservice vocational education programs the equipment, coursework, and program content need to be updated. Respondents stated that Colleges of Education must make arrangements for faculty to attend technical updating programs with industry.

2. Adequacy of Funding for Vocational Preservice Education

One of the issues identified by the Legislature to be addressed by this study was the adequacy of funding for vocational preservice programs. The Board of Regents develops an annual expenditure analysis which identifies both the direct instructional costs for each of the major discipline categories (e.g. education, foreign language, social sciences). Comparable information for specific programs such as vocational home economics is not maintained centrally by the Board office. At the request of Commission staff, the BOR central office compiled estimated direct instructional costs per credit hour for 14 vocational preservice programs in eight public universities. This information is displayed in Table Seven by level along with the system average direct costs for the entire discipline of education. It must be stressed that this data is estimated and is not normally maintained at the institutional level. However, keeping these limitations in mind the information reveals that in most cases, expenditures for vocational education preservice programs equal or exceed the system average for education on the whole. Possible reasons for those programs which are exceptions to this relationship are the presence of more recently appointed faculty hired at a lower level and the enrollment size of the various programs. In calculating these estimated cost figures, an attempt was made to use the same methodology enlisted in developing the overall expenditure analysis. Consequently, the expenditures include only education and general support and do not include grants and other fund sources. It should be noted that vocational teacher educators received an annual allocation for secretarial support and travel from federal funds available for vocational education. This support amounted to \$259,900 in 1983-84. Although these funds are not reflected in the direct instructional cost figures listed in Table Seven, they do represent a significant enhancement to the vocational preservice programs.

Staff interviews and public testimony also stipulated that financial support for vocational education preservice instruction is, for the most part, comparable to or greater than that provided for other teacher education programs. The Commission found no evidence to indicate that changes should be made in the amount of funds currently allocated for preservice vocational education.

TABLE SEVEN

A Comparison of 1983-84 Estimated Direct Instructional Expenditures for Selected Preservice Vocational Education Programs and Average Systemwide Direct Instructional Expenditures for all Education Programs by Level.

Level	Institution and Program																SUS Average Education Discipline
	UF Voc Agr	FSU Voc Home Ec	FAU Bus Educ	FAU Ind Educ	FAU Bus Educ ¹ Dist Educ	USF Voc Educ	UNF Bus Educ	UNF Ind Arts	UCF Voc Educ	UCF Bus Educ	Ind Educ	Tech Educ	FTU Health Occup	Voc Home Ec	Bus Educ	UNF Bus Educ Dist Educ Ind Educ	
Lower	99.43		47.51	127.71		39.73			29.25								47.44
Upper	149.02	48.64	46.19	128.06	158.00	76.84	62.75	71.66	57.73	86.33	70.14	88.70	73.91	87.46	73.91	128.16	60.24
Graduate Class- room	259.56	46.53	47.95	126.19		54.49			57.38	193.30						230.66	102.32
Thesis Disser- tation	418.92	256.10															197.06

¹This combined program was discontinued at FAU as of August, 1984.

Source: 1983-84 SUS Expenditure Analysis, and institutional responses to request transmitted by the BOR Central Office on November 19, 1984.

C. On-site Visits to Vocational Technical Centers and Schools

During the course of this study, Commission members and staff visited twelve vocational technical centers and schools in seven school districts and four community colleges. Meetings were held with deans and directors, and also with vocational faculty. A questionnaire was developed to structure the interview and to serve as a guide to ensure consistency and compatibility in the questions asked and information solicited during each visit. A copy of the questionnaire is included in Appendix C.

Each of the major issues included in the legislative charge to the Commission for this study were addressed during the on-site visits. A brief summary and analysis of the comments made on each issue follows.

Vocational Teacher Certification

The directors in area vocational technical centers which were visited can be separated into two categories with regard to their perceptions on teacher certification. The directors in Dade, Broward and Pinellas school districts, where special training programs are available for novice vocational teachers who lack coursework in education, stated that the certification requirements are realistic. These special programs were praised by the directors as essential to the preparation of competent vocational teachers. These directors also indicated that their teachers passed the teacher certification examination because special support is provided to teachers in these learning programs. Directors in school districts in which these training programs were not available expressed concern that the 20 hours of education coursework at the nearby university or college was not practical or relevant for the novice vocational teacher, and consequently, teacher shortages were apparent in certain occupational areas.

One problem with the Beginning Teacher Program identified by the school district directors was that a peer teacher instructing in the same occupational area as the beginning teacher is sometimes impossible to provide. Also, the Florida Performance Measurement System was depicted by several vocational education directors as being inappropriate for both adult learners and laboratory instruction.

Occupational deans at the four community colleges which were visited voiced strong support for local control of hiring standards for vocational teachers. One dean indicated that these standards have continued to remain equivalent to the state certification requirements; others stated that education coursework is encouraged but not required. All deans stated that recent occupational experience is an essential requirement for employment.

Preservice Training

Most deans and directors declined to comment on preservice vocational education programs at state universities and stated that the majority of their teachers do not complete these traditional four-year teacher education programs. The vocational teacher education program at the University of West Florida was highlighted by three vocational directors as being exemplary. Most deans and directors thought these programs were adequately funded.

In-service Training/Technical Updating/Recertification

Each director expressed concern about the inability to keep their faculty up-to-date, especially in rapidly changing technological areas. Additional support from state and federal funds was requested for this purpose. Two community colleges and two area vocational technical centers indicated that "back to industry" programs were available for faculty to stay abreast of the latest technology. One director stated that a significant problem with such industry-based training activities is that these activities are sometimes not recognized for the purpose of recertification.

Many school district directors stated that they do not get their share of master inservice dollars at the local level and that vocational education has never been a high priority for the use of these funds. A similar statement was made by two of the four community college occupational deans regarding the use of Staff and Program Development (SPD) funds.

State Master Teacher Program

School district vocational education directors reported that the Florida Performance Measurement System which has been approved by the State Board of Education for use in the Master Teacher Program provides one obstacle for an effective program because the system is not designed for the adult learner or individualized instruction in a laboratory setting. Consequently, many directors stated that they have conformed the rating scale to best meet the needs of their faculty.

Greater subjectivity in the reliability of the instrument for measuring teacher effectiveness has been the result of such individualized alteration in the rating scale. Most directors argued that the FPMS must be modified systematically for vocational education. One director stated that the implementation of subject matter examinations will increase the equitability of the state master teacher program throughout the state.

Most directors applauded the action of the 1984 Legislature to delete the master's degree requirement for the state master teacher program; however, a few directors expressed concern that several of their non-degree teachers were eligible to become master teachers but teachers with bachelor's degrees have difficulty in meeting the program requirements.

IV. ISSUES AND RECOMMENDATIONS

A. Certification Requirements for Vocational Personnel

Chapter Two of this report detailed the current state certification requirements for degree and non-degree vocational teachers in Florida's public schools and the changes being proposed in these requirements. The laws governing teacher certification (S.231.17, F.S.) will sunset this year and therefore, are in the process of detailed legislative review. Many reforms in the present system are proposed and several changes in teacher certification in Florida are expected as a result of this legislative review process.

Chapter Two also described in depth the standards set by individual community college boards of trustees for the hiring of vocational personnel. Since the deletion of the state certification requirements for community college personnel in statute in 1973 and subsequent repeal of the state board administrative rule in 1978, the requirements for teaching in the 14 area vocational technical schools under the auspices of community colleges have been regulated by the local boards of trustees. There is great variance in their requirements, ranging from those which continue to require their instructors to obtain state certificates to those which require little or no education coursework, no certification examination and no standardized performance evaluation.

Certification of Instructors for Postsecondary Vocational Education

Public postsecondary vocational education is offered by thirty-three vocational technical centers administered by public school districts and designated by the State Board of Education as area vocational education centers. This designation has also been granted to 14 of the State's 28 community colleges and qualifies these institutions for federal funding for facilities construction and authorizes them to offer postsecondary adult vocational programs. In the 1983-84 Commission study entitled A Study of Postsecondary Vocational Education in Florida it was recommended that this dual delivery system be continued to provide Florida with an effective and efficient system for vocational education. Because one group of postsecondary vocational instructors in Florida is teaching in school districts and another group in community colleges, the requirements for vocational education teachers in the two sectors have been different. During the past seven years, the state requirements for teaching in the K-12 sector have been expanded--a Florida Teacher Certification Examination which measures minimum basic skills and minimum professional competencies was created in 1980, and the performance-based Beginning Teacher Program was added in 1982. Several proposals have been presented recently to the State Board of Education and Legislature to add a subject matter examination as well.

When the state board rules governing state certification for community college personnel were repealed in 1978, the state certification requirements included 20 hours of education coursework and six years of occupational experience. While many community colleges have deleted the education coursework requirement, local boards of trustees at community colleges continue to require six years of occupational experience in the specific area in which the vocational instructor is hired to teach. State certification requirements for vocational teachers in school districts continue to mandate education coursework and occupational experience in addition to the state examination and performance measurement system. Thus, as state certification requirements have become more rigorous,

community college requirements for vocational personnel have become more flexible.

In the preliminary report prepared by the Commission for public reaction, three possible options were presented in the area of state certification for postsecondary vocational instructors. The arguments for and against these possible recommendations were developed and public comment was solicited on the options at the public hearing on February 20th. The three possible recommendations which were presented for public reaction on the certification of instructors for postsecondary vocational education were:

Option #1: Eliminate state certification requirements for postsecondary vocational personnel in school districts.

Option #2: Require minimum state standards for postsecondary vocational personnel in school districts and community colleges.

Option #3: Retain the present system of local control of the credentials for vocational instructors in community colleges; increase the flexibility of state certification requirements in school districts through special training programs and the alternate certification program enacted by the 1984 Legislature. Under this model, the special training programs and comprehensive teacher evaluation system inherent in state certification system for school district personnel could be available to community colleges, but not required.

Most individuals who testified at the public hearing expressed much dissatisfaction with the present system of state certification and many reinforced the Commission's belief that unrealistic and inflexible state certification requirements have been imposed on vocational educators. At the public hearing, there was much discussion as to whether or not state certification should be abolished or made more flexible through alternate certification routes. Most individuals agreed that some basic minimum standards for all teachers need to be retained by the State.

The Commission has concluded that state certification should be retained, but made more flexible for vocational teachers in school districts. Several recommendations to increase the flexibility in the present system will be addressed in the sections which follow. The Commission recognizes that the needs of, and state requirements for, full-time degree teachers in vocational education are different than those of full-time non-degree teachers and those differences will be addressed in the next section. Also, the needs and requirements for part-time vocational personnel are different than full-time personnel. Therefore, the issue of part-time certification requirements will be presented separately in the last part of this section.

The work environment, salary schedules and other factors in community colleges have permitted these institutions to attract qualified faculty. Community college personnel appear to be pleased with existing hiring practices and standards which have been set at the local level. Furthermore, to require state certification for vocational instructors who teach in community colleges and not require this same standard of other community college instructors in academic areas would reduce the authority of the local board of trustees. The Commission found no evidence to indicate that the current hiring practices utilized by community colleges were working poorly. Therefore, the Commission does not

advocate the state certification of vocational personnel who teach in community colleges. However, the Commission believes that certain measures could be implemented by local boards of trustees to verify the occupational and teaching competencies of their instructors. First, examinations designed to measure subject matter knowledge and skills in vocational education, could be used by community college personnel to verify occupational competencies when doubt exists regarding the qualifications of potential instructors because of the lack of recent occupational experience. Second, the art of evaluating teacher effectiveness in the classroom has been improved significantly. The instrumentation currently utilized in public school districts to measure teacher performance in the classroom could be utilized (with modification) by occupational deans and other community college administrators to verify teaching competencies in the classroom early in the school year.

Recommendation:

1. State certification for postsecondary vocational educators in K-12 public schools should be retained; however, the current requirements should be made more flexible and focus on instructor performance. (These will be presented separately for degree and nondegree vocational teachers in the next section.)
2. The standards for the hiring of community college personnel in postsecondary vocational education should continue to be set by each local board of trustees.

The Relationship of State Certification Requirements to the Shortage of Qualified Vocational Personnel--Increasing the Flexibility in State Certification for Degree and Non-Degree Vocational Educators

One aspect of the legislative charge to the Commission requested that an investigation be made of the extent to which certification requirements contribute to the shortage of qualified vocational teachers. Commission staff obtained information on shortage of vocational personnel from several sources. In the third annual report on Teacher Supply and Demand in Florida, released in September 1984, the most acute critical shortage areas were identified by the Department of Education. In vocational education, these areas are agriculture and trade and industrial education. For example, it is projected that 102 new agriculture teachers will be needed in Florida school districts in 1985-86 and that only 28 will be available. Similarly in the trade and industrial areas, 274 new teachers will be needed and only 106 available.

In 1982, a study was completed by the Florida State Advisory Council on Vocational and Technical Education entitled Teacher Shortages in Vocational Education. This study involved a statewide survey to determine the shortage of qualified vocational teachers in Florida's public school districts, area centers administered by school district and community colleges. The findings of this study stated that "the shortage appears to be worse in the area vocational technical centers in the school districts where 75 percent reported a need for additional teachers. Fifty-two percent of the community colleges reported not having enough qualified vocational instructors in certain areas."

The 1982 study identified the four areas with the most severe teacher shortages as industrial, agriculture, industrial arts and health. Table Eight depicts

this data. The survey also asked respondents to name the factors which contribute to an inability to attract qualified applicants. Inadequate salaries and certification requirements were identified as the major factors which contributed to the teacher shortage. (See Table Nine). A significant difference was noted in the responses between school district and community college personnel. While 71 percent of the school district area center directors and 29 percent of the district vocational directors said that certification problems contributed greatly to the inability to attract qualified teachers, none of the occupational deans at community colleges thought "local certification" requirements or hiring standards were a significant factor. Also, in school districts in which special certification programs existed for vocational personnel such as the TVT Program in Pinellas County, certification requirements were not identified as a significant factor contributing to the shortage of qualified personnel. The interviews with vocational deans and directors by Commission staff during visits to selected community colleges and school district area vocational centers confirmed these earlier findings.

State certification requirements have contributed to the shortage of qualified personnel because of the unrealistic expectations being placed on the vocational educator. In several vocational areas, between one half and three-fourths of the new vocational teachers are hired from business and industry. For the most part, these teachers are making a career change after years in a trade or industry. Hence, these individuals have different perspectives and experiences from the novice teachers who exit from Colleges of Education at approximately 20 years of age. The traditional four-year, preservice teacher education programs offered at the public and independent universities are not the primary direct source for these teachers. In addition, many of these individuals entering the teaching profession from business and industry do not have a college degree. In fact, many of them have never taken a college course before entering the teaching profession; however, many have manifested their ability by becoming successful practitioners and businessmen.

When these degree and non-degree vocational educators start teaching in Florida's public schools, under the current state certification system, they are immediately faced with several certification requirements. These certification requirements were developed with the graduating college senior in mind who has had limited experience in the world of work. The degree teacher (with no education coursework) must take at least six semester hours of education courses per year for three years, pass the Florida Teacher Certification Examination during the first year and satisfactorily complete the Beginning Teacher Program. Nondegree teachers have an additional two years to meet the above requirements and must take a minimum of three semester hours of education coursework per year or a total of 20 semester hours before a regular certificate is granted. Compounding the problem is the fact that the college coursework usually must be taken by the novice vocational teachers at night at a local university or college, and at their own expense. Often, these courses are not relevant to the immediate classroom needs of the beginning vocational teachers.

An alternative to the above process is available in Broward, Pinellas, and Dade school districts where special one or two-year training programs are offered for novice vocational teachers who lack education coursework. Participation in these programs is paid for by the school districts. The Committee visited one

TABLE EIGHT

PERCENTAGE REPORTING SEVERE TEACHER SHORTAGES IN VARIOUS PROGRAM AREAS
BY
DELIVERY SYSTEM

	School District	Area Vo-Tech Center	Community College	Overall
Agriculture	32%	8%	0%	19%
Marketing & D. E.	4%	0%	0%	2%
Health	11%	33%	16%	17%
Home Economics	2%	0%	0%	1%
Industrial	32%	38%	12%	28%
Industrial Arts	28%	8%	4%	18%
Business & Office	2%	8%	12%	6%
Public Service	4%	4%	4%	4%

Source: Florida State Advisory Council on Vocational and Technical Education, 1982.

TABLE NINE

PERCENTAGE INDICATING FACTORS WHICH CONTRIBUTE TO THE
INABILITY TO ATTRACT QUALIFIED APPLICANTS, BY DEGREE
OF CONTRIBUTION, OVERALL DATA.

Factors	Contributes Greatly	Contributes Moderately	Contributes Slightly	Does Not Contribute
Poor working conditions	5%	3%	22%	52%
Undesireable location	17%	10%	17%	52%
Discipline problems	4%	17%	14%	45%
Inadequate salary	68%	21%	10%	0%
Certification problems	35%	23%	23%	8%
Poor benefits package	5%	9%	30%	36%
Other	9%	0%	0%	0%

Source: Florida State Advisory Council on Vocational and Technical Education, 1982.

of these alternate programs in Pinellas County which was described in Chapter Three. In essence, these special training programs offer a paid opportunity for beginning vocational teachers to meet certification requirements without leaving the school district. Relevant training is offered in classroom management, evaluation and other teaching techniques and instruction is designed to meet the daily teaching needs of the beginning teacher. Refresher classes are also offered to program participants to prepare for the Florida Teacher Certification Examination. Research has shown that these training program participants pass the Florida Teacher Certification Examination more frequently than those teachers who have taken traditional education coursework. In some cases, as in Pinellas County, the program is offered in conjunction with the local university and program participants have the option for college credit. The State has required Pinellas County to increase the training from one to two years to retain state approval, while Dade County has continued to maintain an effective one-year training program approved by the State.

During Committee interviews with past program participants in Pinellas County, positive comments were made concerning the advantage of the TVT approach when compared to the typical approach of enrolling for traditional university education coursework. In Leon County, where the special vocational certification program has been deleted, the Teacher Education Center director stated that novice vocational teachers who lack education coursework now take regular university courses and have strongly urged district personnel to reinstate the special training program.

In addition to these programs, there are self-paced modules currently available. Learning How to Teach, a series of training modules for vocational instructors, covers such areas as teaching methods, lesson planning, evaluation and testing. The system was developed in Florida and is available through the American Vocational Association. The National Center for Research in Vocational Education at Ohio State University has also developed a series of performance-based teacher education modules for beginning vocational teachers who lack traditional education coursework. At the public hearing, a University of Central Florida professor testified that a performance-based vocational teacher education program developed by UCF could not receive state program approval because the competency-based approach which included a field-based supervised experience, could not be equated to traditional education coursework.

In 1984, the Legislature enacted an alternate certification program for secondary education which was recommended by the Commission in A Study of Colleges of Education. This program provides a mechanism for prospective teachers, including vocational personnel, who hold a bachelor's degree in an arts and science discipline (for example, marketing, business, electronics) to receive a regular state certificate to teach in Florida schools without taking additional education coursework if they obtain a passing score on the Florida Teacher Certification Examination, including the professional component, and successfully complete the Beginning Teacher Program. When implemented, the alternate certification program will provide a mechanism for the degree vocational teacher who is competent in the classroom but who lacks the education coursework, to meet the state certification requirements under the jurisdiction of the school district. Since many vocational teachers do not possess a degree, the alternate certification program will not attract many vocational teachers. It is an important precedent, however, because it recognizes paths to teacher competence other than traditional teacher training courses.

Recommendation:

To increase the supply of degree and nondegree vocational teachers, particularly in critical shortage areas, two approaches are recommended:

- For degree vocational teachers, the alternate certification program enacted by the 1984 Legislature should be utilized by Florida school districts to employ teachers who are competent in the classroom but who lack the necessary education coursework to obtain regular teaching certificates.
- For non-degree teachers, special training programs should be established for teachers to acquire necessary teaching competencies similar to the programs which have effectively been developed by Dade, Pinellas and Broward school districts. Additional Teacher Education Center dollars or federal vocational grant funds should be redirected for this purpose. Smaller districts should be encouraged to provide this special training collaboratively with other districts. Community college vocational personnel should be allowed to participate. Local regional coordinating councils should promote these collaborative training programs for the nondegree vocational teachers to acquire necessary teaching competencies and meet state certification requirements.

In developing implementation guidelines and procedures for these modified certification programs, the Department of Education's Office of Teacher Certification should secure the input of the Division of Vocational, Adult and Community Education and recognize the unique characteristics of the vocational educator. Rigid state standards should not be imposed which require that the training programs developed locally by school districts be equated to university coursework. Programs which have been developed and effectively implemented through a one-year sequence should not be increased to two years because of additional standards imposed by the State.

The Florida Teacher Certification Examination and the Florida Performance Measurement System

The Florida Teacher Certification Examination was implemented in 1980 to verify at the state level the possession of minimum basic skills and professional competencies essential for teaching. The Florida Beginning Teacher Program was implemented in 1982 to assure supervision of classroom performance by all beginning teachers. Through the Florida Performance Measurement System (FPMS) of the Beginning Teacher Program, performance evaluation standards exist to assure that only competent individuals will be certified in Florida as teachers. Both of these state initiatives have been required for school district personnel only. In considering alternatives to present state certification requirements for school district personnel presented in the first section, the Commission believes that there are benefits to a standardized system of performance evaluation inherent in the FPMS, and also benefits to a standardized examination to measure basic skills, as well as professional and subject matter competencies. However, certain modifications in the present examination and performance measurement system for vocational teachers are warranted. These will be addressed separately below.

The Florida Teacher Certification Examination and the Vocational Teacher

Nondegree vocational educators have experienced difficulty with passing the Florida Teacher Certification Examination. Over 50 percent of the non-degree teachers fail the examination on their first attempt. Concerns related to this issue were addressed in a recent doctoral dissertation (Fernandez, 1983). Section 231.17(2)(d), F.S. was modified in 1982 and again in 1983 to provide nondegree teachers with additional time in which to successfully complete the four subtests of the Florida Teacher Certification Examination. Non-degree vocational teachers now have five years to pass the FTCE, rather than the usual one year allowed for degree teachers. The statute reads:

A person who meets all certification requirements which have been established by law or rule, other than the passing of the written examination, may be issued an initial temporary certificate for the first year of employment in a public school district in this state. However, the State Board of Education shall adopt criteria for eligibility for the initial temporary certificate for nondegree teachers of vocational education. Such teachers may delay examination requirements specified in paragraphs (b) and (c) until professional educational requirements as established by law or rule are met; however, all examination requirements must be met prior to the beginning of the sixth year of employment. (S.231.17,(2)(d) F.S.)

The modification outlined above was a positive move by the Legislature to accommodate the needs of non-degree teachers who need some additional practice in basic skills or coursework in education to pass all four subtests of the teacher certification examination.

In October 1984, the Education Standards Commission proposed a new set of requirements to obtain a temporary non-degree certificate to teach in Florida's public schools. The Education Standards Commission recommended that the temporary non-degree certificate be valid for two years and be renewable once. For an individual to be eligible for a temporary non-degree certificate, the following requirements were proposed by the Education Standards Commission:

1. Complete an appropriate application form.
2. Pay the appropriate fees.
3. Document six (6) years of successful work experience and/or the appropriate professional license acquired during the last ten-year period in the field in which certification is sought.
4. Document evidence (within one year of receipt of the temporary certificate) of an acceptable score on an occupational test approved by the state for the field in which certification is sought or successful performance on a state-approved competence examination.
5. Verification of an acceptable score on the CLAST examination or its equivalent.

6. By the conclusion of the second temporary nondegree certificate, the individual must demonstrate evidence of receipt of an acceptable score on the professional section of the Florida Teacher Certification Examination.

The Education Standards Commission proposal contains a requirement that the candidate document evidence of an acceptable score on an occupational test approved by the State for the field in which certification is sought. This proposal supports the recommendations of several previous studies conducted on teacher education and teacher certification. In March 1983, a report entitled Improving the Quality of Teacher Education in Florida was released by the Joint Executive and Legislative Task Force for Teacher Education Quality Improvement. This study recommended that a non-degree vocational education candidate successfully pass a national validated occupational proficiency examination. This study further recommended that the Florida Teacher Certification Examination include a subject area component as did the Commission's 1983-84 Study of Colleges of Education.

Subject matter or occupational testing in vocational education is more feasible than in many other teaching areas since examinations in a number of vocational fields have been developed and validated by the National Occupational Competency Testing Institute (NOCTI). NOCTI was established in 1973 by a consortium of states for the purpose of developing teacher occupational competency tests (TOCTS). Over 40 examinations have been developed (Appendix D). These tests are designed for individuals experienced in trades or occupations who need to present objective evidence of their competence to become teachers. These examinations consist of both a written and performance assessment and are periodically reviewed and revised to ensure validity. NOCTI tests are available for most of the industrial and technical areas and also in certain health occupations.

The NOCTI examinations are used for initial certification in Georgia, Kentucky, Oklahoma, Pennsylvania, Virginia and Rhode Island. Satisfactory completion of the NOCTI examination may also be used for a portion of the required work experience in Florida, Colorado, and several other states.

In addition to being used as a partial waiver for occupational experience (four of the six years), a successful score on the NOCTI examination has enabled the vocational educator in Florida to be granted 30 semester hours in content coursework towards a bachelor's degree. The NOCTI examinations were used extensively in Florida prior to 1981 when the Division of Vocational, Adult and Community Education deleted the use of federal funds for this purpose because of other priorities.

The examination fee is \$130 per instructor. However, when compared with the cost of college enrollment this figure is not unreasonable. Although the cost of administering NOCTI examinations has been cited as a deterrent to their use, other states (e.g. Pennsylvania) have negotiated special agreements with NOCTI due to volume use which permits the tests to be administered for about \$100 per individual.

Prior to a wide scale use of NOCTI or other subject matter tests in the certification of vocational teachers in Florida, the content of such tests should be validated and compared with the curriculum framework and student

performance standards developed by the State for the various disciplines to assure that the appropriate knowledge and skills are being measured. In areas in which valid tests are not available, a panel of industry experts could be convened to review instructors in particular fields on either a statewide basis or locally in accordance with the curriculum framework and student performance standards.

The Institute for Instructional Research and Practice at the University of South Florida is currently responsible for the development of subject matter examinations for use in the State Master Teacher Program. In the vocational area, the Institute has recently completed work on a business education examination and plans to develop a test for home economics next year. In the event that the NOCTI or other subject matter examinations are used in the initial certification process, the work of the Institute should be coordinated to provide examinations not presently available and avoid duplication of effort.

Item 5 of the proposed Education Standards Commission criteria for the temporary nondegree certificate calls for verification of an acceptable score on the CLAST examination or its equivalent. Currently, many nondegree vocational teachers have difficulty passing the basic skills test of the Florida Teacher Certification Examination which has a level of difficulty well below high school. The College Level Academic Skills Program had identified those basic skills competencies needed to be mastered by college students at the end of the sophomore year and the CLAST test is utilized to measure those competencies. The Department of Education is currently negotiating a contract with the University of Florida to conduct a correlational study which will compare the basic skills competencies measured by the CLAST examination with those of the Florida Teacher Certification Examination. As called for in the Commission's Study of Colleges of Education, the comparison is a necessary first step before a substitution of one examination for another is made. The results of this comparison should be available in June 1985 and will verify the level of basic skills measurement in reading, writing, and mathematics for each test.

Without the results of this correlation study, however, the Postsecondary Education Planning Commission's initial reaction to the proposal is that requiring a non-degree vocational educator who may only possess a high school diploma to pass an examination which measures basic skills for entering college juniors is inconsistent. Either the non-degree teacher should be required to take the basic skills component of the current teacher certification examination and continue to be granted five years to pass this examination, or non-degree vocational teachers must be required to complete two years of college or the equivalent, and pass the CLAST examination before the regular teaching certificate is granted. Utilization of the CLAST examination for the non-degree applicant has also been criticized as having the potential of further limiting the availability of non-degree vocational educators, and of subjecting the Department to legal action.

Recommendation:

The Florida Teacher Certification Examination (FTCE) should be revised in light of the special needs of vocational educators as follows:

- The comparison of the basic skills components of CLAST with those of the Florida Teacher Certification Examination should be completed by the Department of Education before a decision is made regarding the use of CLAST in the certification process. If the competencies measured by the CLAST are found to be at an equal or higher level than the FTCE, then the CLAST should be substituted for the basic skills component (reading, writing, mathematics subtests) of the Florida Teacher Certification Examination for all academic teachers and degree vocational teachers. Candidates who have passed the CLAST or an equivalent measure of basic skills previously should be exempt from the basic skills section of the Florida Teacher Certification Examination.
- Nondegree vocational educators should continue to take the basic skills component of the current teacher certification examination or an examination which would measure basic skill competencies at the high school level.
- The use of the NOCTI or other validated examinations as the subject matter component of the Florida Teacher Certification Examination should be considered in certain industrial and health areas; subject matter examinations should be developed in areas in which valid instruments are not currently available for a particular field. These subject matter examinations should be updated on a rotating basis. In the absence of a validated examination, a panel of experts should determine attainment by the applicant of the necessary knowledge and skills specified in the curriculum framework and student performance standards developed by the State.

The Florida Performance Measurement System and the Vocational Educator

The Florida Performance Measurement System (FPMS) was established concurrently with The Florida Beginning Teacher Program to provide standardized procedures for conducting observations and performance evaluations of beginning teachers as is described in detail in Chapter Two. In their proposed criteria for certification renewal, the Education Standards Commission has also recommended that a requirement for certificate renewal be "the demonstration of satisfactory performance on the summative evaluation on a state-approved performance measurement system." To date, the State Board of Education has only approved the FPMS and Dade County's performance evaluation system for use in Florida.

Despite the widespread use of the FPMS by 66 school districts for initial certification, beginning teachers, master teachers, and potentially for certificate renewal, the system is not without limitations. The FPMS has been criticized for its inappropriateness for the adult learner and for use in an individual, laboratory or clinical instructional setting. The belief is widespread that the system does not deal adequately with skills learning. The four certified observers hired by the Commission to compare the teaching abilities of certified and non-certified vocational educators concurred that the system should be modified to more appropriately evaluate vocational educators.

A University of Central Florida professor has developed some concepts, indicators and examples from vocational education for use with the Florida Performance Measurement System. These have been used to a limited extent with vocational observer trainees; however, until recently there had not been a

statewide effort to modify the current system, and the number of FPMS certified observers and trainers in vocational education has been small. In December 1984, the Division of Vocational, Adult, and Community Education convened a meeting of state officials to discuss needed modification in FPMS and since that time, the University of Central Florida has been contracted to initiate the modifications.

Modifications in the FPMS are occurring in other teaching fields. Special task forces have been established in the areas of exceptional student education, school library media and student services to modify the instrumentation used in the FPMS system and the coding manual which is used to train observers. Department of Education personnel shared that the empirical research base for the teaching area of exceptional student education is being developed at Florida State University and a new coding manual for observers of special education teachers is being field-tested. The modified coding manual will reflect the needs of individualized instruction and clinical teaching for exceptional student educators.

Recommendations:

1. Current efforts of the Division of Vocational, Adult, and Community Education to examine the FPMS for modifications appropriate to vocational education should be endorsed. A broadly based task force should be established to review the necessary modifications. Revisions should include a review of the research on vocational teaching, necessary modifications in the FPMS instrumentation, and examples from vocational education in the coding manual which is utilized to train observers for the evaluation of vocational educators.
2. College of Education faculty in vocational education should be trained in the use of the Florida Performance Measurement System so that the teaching competencies which it assesses can be incorporated into preservice vocational education programs.

Occupational Categories for Vocational Education

The Commission believes that the verification of subject matter expertise in the specific area in which the vocational educator will teach is essential. Community colleges verify such competence by requiring approximately six years of recent occupational experience in the area in which an applicant will teach; school districts have specified through state certification requirements that six years of occupational experience or an equivalent must be verified before the novice vocational teacher obtains an initial temporary certificate. Both community college and school district administrators have considered occupational experience to be essential for employment.

During the past few years, several studies on teacher certification in Florida have recommended that the 96 general non-vocational teacher certification categories be examined for possible reduction. For example, separate categories for junior high school and middle school certification in subject areas represent unnecessary proliferation. The Education Standards Commission has studied these certification categories and has recommended a reduction in the number of certification areas in academic subjects to 30.

In vocational education, there are currently over 130 areas of state certification. These include both degree and nondegree categories and will be described in detail in the final report. The Educational Standards Commission proposal for certification reduction recommends that the areas of certification for vocational education be reduced to nine, including agriculture, agriculture occupations, business occupations, diversified occupations, health occupations, industrial arts, industrial occupations, home economics occupations, and marketing/distributive occupations. Under the modifications in the proposal, industrial education teachers currently certified in 60 separate occupational areas would be certified under the broad certification area of industrial occupations and not in the individual program area. Specifically, the new proposal calls for teachers of automotive mechanics, welding, electronics, and drafting to be certified as industrial occupations teachers.

The Florida Vocational Association and the Division of Vocational, Adult, and Community Education have voiced strong opposition to this new proposal. In a June 1984 memo to the Education Standards Commission, Vocational Education Division Director, Joe Mills, urged the Commission to defer its submission of the proposed model and noted that:

The proposed model does not contain the provisions necessary to assure that the teacher in a specific vocational program has the competencies comparable to those of the competent worker in an occupation. For example, the model's proposed certification, Industrial Occupations, would in effect permit a cosmetology teacher to provide instruction in the plumbing program. The model's proposed Optional Certification Endorsements would make it practically impossible for the State to assure or guarantee any degree of vocational teacher accountability. Any acceptable proposed model must contain the basic assurance that the vocational teacher in the classroom has demonstrated, prior to initial temporary certification, that he/she has the occupational skills comparable to those required of the worker in the occupation.

Governor Bob Graham has stated that a vocational teacher should possess the same minimum competencies to teach as are required for that person to be employed in the occupation. Under a system of state certification, the State of Florida has the obligation to ensure such competencies in its teachers.

Several problems have been caused by broad certification categories for vocational educators and these were noted during visits by Commission staff to various vocational technical centers. For example, prior to 1984, building construction certification was available as one state certification program under the broad category of industrial education. Building construction certification included teachers of carpentry, roofing, tile setting, insulation installation, and others. Obviously, different skills and knowledge are needed by teachers in each of these specific program areas. However, under union contract provisions in several districts, the state teaching certification category determines one's status on a continuing contract. For example, in one school district in Florida, a roofing teacher who was certified in building construction, was no longer needed at a particular school because the roofing program was terminated. However, another school in the same district needed a carpentry teacher and since both program areas had the broad certification category of building construction and the roofing teacher was on a continuing

contract with the school district, the principal was required under the provisions of the contract to hire this teacher to teach carpentry.

The above situation would be accentuated in a number of districts as a result of further consolidation of the categories within industrial education at the state level, unless certain quality control measures are implemented. One approach would be to require each school superintendent or principal to verify at the local level that the teacher has the occupational experience in the specific trade area in which he/she will be teaching. This recommendation was made by the Auditor General in his 1983-84 study of the Office of Teacher Certification. For example, a competency-based approach to certification could be initiated by each local advisory committee to verify that the prospective teacher has the knowledge and skills necessary to teach in a particular trade area. Through interviews or actual teaching in a classroom situation, evidence can be presented to the advisory committee as to whether or not the candidate has the occupational skills necessary to be an effective teacher in the trade, and the candidate could be certified locally. In response to the proposal for local control over certification, however, several area vocational directors have argued that in the present system they do not have that authority over union contracts to terminate a teacher if the specific program is no longer offered and another program in the same district and certification area needs a teacher. Therefore, these directors have turned to the State to provide the specific program area certification needed to ensure quality vocational education.

Proponents have argued that an advantage of consolidation in the number of categories is that it would facilitate the efficiency and effectiveness of the Office of Teacher Certification in the Department of Education. In effect, however, each school district will need to establish an Office of Teacher Certification to ensure that every teacher has the appropriate specific credentials, such as the necessary occupational experience in the trade or industrial area, as the state certification would no longer ensure such specificity. One questions whether such a recommendation would facilitate the efficiency and effectiveness when the entire state is considered and the necessity for 67 certification offices and individual guidelines and rules are developed. Problems with reciprocity due to variations in specific criteria at the local level would be certain to arise as well when a teacher transfers from one school district to another. At the public hearing on February 20, 1985, each vocational director who testified stressed that the specific occupational categories are needed and should not be reduced. In fact, testimony was heard that these categories should be expanded as new technologies and support services are developed.

Statewide knowledge and skills standards have been developed by the Division of Vocational, Adult and Community Education on the competencies needed in each occupational area. Local school districts and community colleges could augment the state-developed curriculum framework and student performance standards. Attainment of the knowledge and skills competencies would be demonstrated through use of subject matter examinations and performance measurements which were discussed in the previous section.

Recommendations:

1. To ensure quality standards for the certification of vocational educators in Florida and to guarantee that each vocational teacher has the necessary

skills and knowledge required in a specific trade or industrial program area, the current number of occupational categories in vocational education should not be reduced significantly. In collaboration with the Division of Vocational Education, the Education Standards Commission should examine the existing certification categories to determine if certain vocational education certification areas are obsolete or in need of expansion, and when appropriate, delete or augment these discrete areas.

2. The curriculum framework and student performance standards for each occupational category which have been developed by the Division of Vocational, Adult and Community Education should be periodically updated. Attainment of the knowledge and skills competencies should be demonstrated through subject matter examinations and performance assessments.

Requirements for Part-time Vocational Certification

Part-time certificates are available for vocational and adult education teachers who teach in Florida school districts less than 451 hours per year. Part-time certificates are not available for teachers in the academic areas. The part-time certificate was created to accommodate the needs of instructors who are primarily not trained as teachers, retain their occupations in the trade industrial areas, and teach less than half-time. Many part-time teachers instruct in special programs such as night school and community education programs. Most part-time vocational teachers teach between 160 and 450 hours per year as State Board of Education Rule 6A 1.502(9), FAC, states that "part-time personnel who are employed to teach no more than 160 clock hours per year do not have to be certified by the State."

Although the part-time vocational certificate requires the same occupational experience as a full-time certificate, a part-time certificate holder is not required to pass the Florida Teacher Certification Examination, to participate in the Florida Beginning Teacher Program, or take twenty hours of coursework in education. The application for a part-time certificate must include a request from the district superintendent that the applicant be issued a vocational education certificate. Part-time certificates are valid for five years, and may be reissued based on a completed application that includes the request of a Florida district superintendent.

The number of part-time certificates which were issued for two consecutive years (1981-1983) by the Department of Education as compared to temporary and regular certificates is displayed in Table Ten. As can be seen in this table, the State issues more than twice the number of part-time certificates as compared to regular full-time certificates and both certificates are valid for five years. Temporary full-time certificates are valid only for one year as the applicant must show annual progress towards complying with the certification requirements (that is, passing the Florida Teacher Certification Examination, completing the education coursework requirements, and succeeding in the Beginning Teacher Program).

TABLE TEN

VOCATIONAL CERTIFICATES ISSUED IN 1981-82 AND 1982-83
BY THE DEPARTMENT OF EDUCATION

TYPE OF CERTIFICATE	1981-82	1982-83
Regular Full-Time Certificate (valid for 5 years)	750*	625
Temporary Full-time Certificate (valid for 1 year)	1650	1475
Part-time Certificate (valid for 5 years)	1875	1725

*Note: Numbers are rounded to nearest 25.

Source: Department of Education, Office of Teacher Certification,
January, 1985.

An important distinction between the full-time certificate and part-time certificate is that the part-time certificate application must be accompanied by a letter of request from the district school superintendent. Thus, part-time certificate holders (at least during the first year) are employed by a school district, whereas full-time certificate holders (whether regular or temporary) are not necessarily employed.

Florida has a significant number of vocational teachers (at least 20%) with part-time certificates teaching vocational education in Florida's 67 school districts. In several larger vocational technical centers visited by Commission staff, there were as many part-time as full-time teachers. Many part-time certificated teachers were instructing from 10 to 15 hours a week, based on an hourly wage as opposed to a continuing contract, and were therefore considered part-time by the school district even though they taught more than 450 hours per year. Because of the large number of vocational teachers holding part-time state certificates, and because of the abuses observed in the system, the Committee believes that the State should monitor the use of the part-time certificate to verify that school districts do not hire teachers on part-time certificates who teach more than 450 hours per year to circumvent the state certification requirements for full-time teachers.

Recommendation:

Through the program review process, the Division of Vocational, Adult, and Community Education should monitor the use of part-time certificates by school districts for compliance with state requirements.

B. Preservice Vocational Education Programs

In proviso language the Commission was asked to examine the preservice education programs in terms of content validity, funding, and availability. Baccalaureate degree programs in vocational education are offered in the areas of industrial arts education, agricultural education, business education, home economics education, and marketing and distributive education, and health occupations education. One or more of these programs are offered in Colleges of Education in eight state universities and also in four state-approved teacher education programs in independent colleges and universities in Florida. Data obtained from the Office of Teacher Certification indicate that less than one-third of the vocational educators enter the teaching profession through these traditional undergraduate degree programs.

The activities undertaken by the Commission in the area of preservice vocational teacher education were described in Chapter Three. As the result of the Commission investigation in conjunction with this component, it appears that state universities do not have a coherent plan for updating their preservice vocational education programs. The specific competencies identified by the State and industry as requirements for entry-level employees should form the standard against which prospective teachers are evaluated. As recommended by the High Technology and Industry Council following their visits to selected schools in Southeast Florida, preservice training programs should be developed around these identified competencies and provisions should be made for an assessment of teacher educator's skills related to them.

Approximately one-third of the preservice education programs do not have an advisory committee. Of those who do, only 43 percent indicated that advisory councils were involved in the design of program curricula. Functional advisory councils can be used as partners with education, and can serve as a valuable resource providing the business and industry prospective. Advisory committees should represent a cross-section of business and industry including employers, supervisors, and specialists in the occupation. An additional contribution to these councils would be the participation of past graduates with newly acquired experience in the occupation. Active advisory councils can be of valuable assistance in validating the necessary competencies and ensuring that instructional materials, equipment and training devices are updated periodically. While most faculty stated that opportunities existed for professional updating, only ten percent of the faculty stated that a faculty exchange program with business and industry was operational. In general, preservice vocational education faculty stressed the need to remain competent in a skill or trade, and updated in terms of the latest technology.

Recommendations:

1. Competency-based curriculum materials which are designed on the basis of the latest technology and which are updated periodically should become an integral part of all preservice vocational education programs.
2. Vocational education advisory councils in specific areas should be involved in the design and review of the undergraduate program to ensure the validity and relevance of equipment, coursework and program content.

3. College of Education faculty exchange programs with business and industry to keep faculty up-to-date in rapidly changing technical areas should be encouraged and facilitated.

C. Inservice Education, Technical Updating and Recertification

In recent years, the issue of maintaining the technical skills of vocational instructors has become the object of increasing attention and concern. Changes in both the workplace and the teaching profession have resulted in an unprecedented demand for mechanisms to assure that the knowledge of skills of vocational educators are up-to-date. Probably the most significant element in the evolution of the working environment is the arrival of the computer. While its impact is seen most directly in such areas of electronics as data processing and telecommunications, one is hard pressed to identify fields of employment which have not been affected by this technology. Auto mechanics, banking, agriculture, health care, drafting, manufacturing are a few examples of the fields which have been impacted by the growing presence of computers.

The composition of the teaching staff to meet the challenges imposed by accelerating technical changes is characterized by individuals whose familiarity with the changing workplace is limited. Contributing to this situation are a number of factors, including continuing contracts and tenure, which encourage teacher longevity and reduce the number of openings for new personnel; declining enrollments which require the elimination of those faculty with the least seniority and the most recent actual experience in business and industry; and state certification requirements which discourage business and industry personnel from entering the teaching work force.

The extent of the need for technically current vocational instructors has been documented by Hamilton, Wonacott and Simandjuntak (1982). Their study examined the perceptions of selected experts in nine states regarding the need for technological updating among secondary and postsecondary instructors. Analysis of these aggregated perceptions resulted in an estimate that almost half the postsecondary teachers and one third of the secondary instructors in these nine states had substantial or critical need for more current technical knowledge and skills.

A more recent study by Wonacott and Hamilton (1984) describes four barriers which contribute to this problem:

- Policy - Teachers might need years of occupational experience for initial certification but this concern for currentness is not as evident in recertification requirements.
- Motivation - Teachers and administrators must be aware of the need for updating and the importance of maintaining current knowledge and skills.
- Resources - It takes time, money, and support services to update teachers.
- Access to the means for updating - Such training must be well-organized and presented at convenient times and locations to be effective.

Recommendations identified by the Commission which are designed to address these areas of need are presented below.

Recertification Requirements for Technical Updating

While a number of exemplary practices in the area of technical updating were identified during the course of the study, the lack of a consistent statewide standard was evident. Such a systematic approach should serve as a primary motivating force for vocational educators to upgrade their technical knowledge and skills. As stated previously, six years of work experience is the general requirement for initial certification of a non-degree vocational instructor. Once certified however, the emphasis on experience in the workplace diminishes. Under present policy in statute and rule, a vocational instructor may be recertified for five years based on satisfactory completion of six semester hours of college coursework three of which must be related to education but not necessarily vocational education or the instructor's area of expertise. For example, a three-hour course in foundations of education or vocational administration theory would meet the in-field requirement for an auto mechanics instructor. While it is clear that a greater focus on relevant technical training is needed for recertification, it is also obvious that the period for which such training will remain current varies significantly among vocational fields. While home economics instructors can probably continue to be recertified on a five-year cycle, rapid changes in electronics technology demand a more frequent review.

It is not within the scope of the present study to determine the appropriate renewal period, required hours of coursework, and the knowledge and skills to be obtained for each vocational field of study. This should be accomplished by the State Advisory Council for Vocational Education during the next year in cooperation with the Education Standards Commission, the High Technology and Industry Council, and other interested parties. In order to provide for consistency among all publicly supported vocational programs, the standards developed as a result of the process should be applicable to both school districts and community colleges.

To reinforce the implementation of this policy, the five-year program review cycle for school district and community college vocational programs should continue to monitor the qualifications of the program instructors and the technical updating activities in which they have participated. The regional coordinating councils and local vocational craft committees represent access points for the involvement of business and industry representatives in the five year review process and more frequent spot checks on the currency of the vocational instructors and curriculum.

Recommendations:

1. School district and community college vocational instructors should be required to periodically update technical knowledge and skills in their specific field of expertise in accordance with statewide standards.
2. Members of the regional coordinating councils and local vocational craft committees should participate in school district and community college vocational program reviews to assure the currency of vocational instructors and curricula.

Representation of Vocational Personnel on Teacher Education Center Councils

At present, vocational education is included in the Master Plan for Inservice Education which is developed for each school district pursuant to S.236.0811, F.S. Due to the comprehensive nature of this plan it is important that vocational educators are adequately represented in any deliberations involving the identification of priority needs. The law specifies that these plans shall be "based on an assessment of the inservice educational training needs of the district conducted by a committee which includes parents, classroom teachers, and other educational personnel." In most instances, the Teacher Education Center Council established pursuant to S.231.606, F.S., performs this function. However, neither statute (S.236.0811 and S.231.606, F.S.) specifies the level or type of instructors that are to be represented on the council or committee.

Recommendation:

The membership of Teacher Education Center Councils and other Master Inservice Plan Committees should include proportional representation from vocational education. An effort should be made to involve nondegree vocational personnel because of the large percentage of vocational instructors who do not have a college degree.

Master Inservice Plan for Vocational Education

In some instances, there may be only one or two vocational instructors in a given field for an entire school district or region; for example, Laser Optics. Consequently, the delivery of inservice activities for these individuals through traditional inservice and Teacher Education Center procedures is not cost effective nor practical. In these areas, a centralized approach may be warranted which should be coordinated at the state level. In some cases, training and other inservice activities in locations out-of-state may be appropriate.

The Division of Vocational, Adult and Community Education includes an Office of Program and Staff Development which is responsible for the administration of personnel development funds available through the Federal Vocational Education Act. This office and these federal funds represent an important resource for addressing training needs not being served at the individual district or college level. It is suggested that a formal mechanism for coordinating both statewide and local training activities be established in the form of a Master Inservice Plan for Vocational Educators. The plan would provide for determination of teacher professional and technical updating needs, procedures for meeting these needs and the identification of resources available for implementation costs including travel and per diem, substitute teachers, faculty and consultants to provide the training, and other logistical and administrative costs. The plan should stress the coordination of all funds - local, state, and federal - in addressing the training needs of vocational educators. The plan should be developed in cooperation with all sectors involved - The Division of Public Schools, the State Board of Community Colleges, and the Board of Regents.

Recommendation:

The Department of Education should be assigned responsibility for the development and implementation of a Master Inservice Plan for Vocational Educators which would serve both the school district and community college sectors. The Plan would complement existing local plans and identify areas in which statewide activities are needed. The Plan should be based on a five-year cycle and assure that the needs of personnel in all vocational fields are addressed.

State Resources for the Inservice Education of School District Personnel

The success of efforts to encourage increased inservice activities for vocational educators is heavily dependent on the availability of funds to carry out this training. Funds are earmarked within the Florida Education Finance Program for inservice training. For each unweighted FTE, \$6 is set aside for this purpose. Statewide, this amounts to approximately \$9 million annually. The most recent data available from the Office of Teacher Education indicates that vocational instructors are not receiving an equitable share of these funds. Table Eleven reveals that vocational instructors in school districts receive approximately 4.1 percent of the available funds from all sources. This table also indicates that approximately 11.6 percent of the instructional staff are vocational educators.

At the same time, it should be noted that the total amount available for inservice activities in school districts has not kept pace with other costs. In 1974-75, the amount per unweighted FTE for this purpose was \$5.00. This represented .85 percent of the base student allocation of \$587.00. This figure was increased to \$6.00 in the 1982 General Appropriations Act (Specific Appropriation 310, Chapter 82-215, Laws of Florida) with the requirement that \$1.70 of the \$6.00 would be used to cover the cost of implementing the Beginning Teacher Program. The administration of Teacher Education Centers is also supported from this fund source. In 1984-85, the \$6.00 per unweighted FTE represents .37 percent of the base student allocation of \$1,614.06. If the \$1.70 for the Beginning Teacher Program is subtracted the remainder (\$4.30) equals .27 percent of the base student allocation. Thus, while the basic allocation per student has almost tripled, the actual dollars earmarked for inservice training have declined significantly from the 1974 level.

Previous studies have recommended modifications to the current procedure for funding inservice activities. Most recently, the 1983 Report on Florida's Teacher Education Centers prepared by the Education Standards Commission suggested that .88 percent of the base student allocation multiplied by the unweighted FTE student population be appropriated to school districts for staff training. This approach is similar to that used by the community colleges which requires each institution to dedicate 2 percent of its Community College Program Funds for staff and program development. In view of increased demands for updating in all teaching fields, particularly in the technical areas where change is most rapid, and in consideration of impact of inflation, the percentage approach appears to be well-founded. The figure of .88 percent would permit a return to the historical ratio set in the early 1970's. Rather than a massive infusion of funds for this purpose in one year, a two-year phased-in approach with an intermediate increase to .6 percent is recommended. Based on current and projected student enrollment and the current base student

TABLE ELEVEN

STAFF DEVELOPMENT INFORMATION FOR VOCATIONAL EDUCATION TEACHERS IN 1981-82*
AS REPORTED TO THE DEPARTMENT OF EDUCATION BY FLORIDA'S 67 SCHOOL DISTRICTS

Total number of all vocational education teachers in Florida school districts in 1981-82	9,225
Total number of all teachers in Florida school districts in 1981-82	79,644
% vocational education teachers out of total number of teachers	11.6%

Total number of proposed vocational education staff development components in 1981-82	1,047
Total number of implemented vocational staff development components in 1981-82	270
% of staff development components which were implemented in 1981-82	25.8%

Total number proposed staff development components in all areas in 1981-82	10,632
Total number of implemented staff development components in 1981-82	4,375
% of implemented staff development components in all areas in 1981-82	41.1%

Total number of school district personnel participating in vocational education components in 1981-82	12,477**
Total number of school district personnel participating in all educational components in 1981-82	386,654**
% of school district personnel participating in vocational education components in 1981-82	3.2%

Total \$ spent on vocational education staff development components in 1981-82	\$802,152***
Total \$ spent on all staff development components in 1981-82	\$19,446,380
% of \$ spent on vocational education components out of total spent for all staff development in 1981-82	4.1%

Total participant hours spent in vocational education components in 1981-82.	287,929 hours
Total participant hours spend in all staff development components in 1981-82	4,867,113 hours
% of time spent in vocational education components out of total staff development hours for 1981-82	5.9%

*Last year for which cumulative data is available from DOE

**Represents a duplicate count

***Includes all fund sources (state and federal \$)

allocation, inservice funds for the next two years would be approximately \$16.2 million and \$24 million respectively.

As discussed earlier, data obtained during the course of this study indicate that of the funds presently available for inservice staff development, vocational educators are not receiving a proportionate share in school districts when such funds are desperately needed for technical updating in rapidly changing areas. A similar situation appears to exist in community colleges. Table Twelve displays the most recent available analysis of community college expenditures for inservice activities. Among the colleges, the percentage of Staff and Program Development funds used for vocational inservice ranged from zero to 33.3 percent with a median of .6 percent in 1979-80. Table Thirteen indicates that this level of support is not proportionally based on the number of vocational faculty, which in 1982-83 represented 47.6 percent of all instructional FTE. Reasons given for this discrepancy include the availability of other funds and the difficulty in organizing activities when there are only one or two vocational instructors in a specific occupational field in the geographic area. The Division of Community Colleges stopped collecting this information centrally in 1979-80. The Office of Teacher Education collects this information for school districts but reports that they are unable to access it beyond 1981-82 due to limited computer support services. Regardless of the amount of funds available for inservice education, the share used by vocational instructors should be monitored as part of the program review process. Due to the technical nature of many vocational programs, the costs involved in updating these instructors will in many cases exceed the in-service costs for other areas of the curriculum. Consequently, a proportionate share of available inservice funds should be considered the minimum level of support for meeting the needs of vocational instructors. If less than the proportionate share is being used, the reasons for this should be explained and the situation modified.

Recommendations:

1. To keep pace with inflation and increasing demands for updating due to rapidly changing technologies, the funds earmarked for inservice training in the Florida Education Finance Program should be based on a percentage rather than a specific dollar amount of the base student allocation. The percentage should be increased to .88 percent over a two-year period to permit adequate preparation for the most effective use of these additional funds.
2. The amount of inservice funds expended for vocational instructors in school districts and community colleges should be continuously monitored by the Division of Vocational, Adult and Community Education and the State Board of Community Colleges as part of each system's program review process to ensure that vocational educators in each sector are receiving at least a proportionate share of staff development dollars, especially for the purpose of technical updating.

Federal Resources for Inservice Education

One explanation suggested for the relatively low availability of FEFP-funded inservice activities was the presence of Federal Vocational Act Funds earmarked for this purpose. Appendix E describes the general distribution of these funds which amounted to \$1,384,226 in 1983-84. The State Plan for Vocational

TABLE TWELVE

Staff Development For Vocational Education Faculty in Florida's
Community Colleges in 1979-80 Funded Out of SPD Funds

<u>COMMUNITY COLLEGE</u>	<u># COMPONENTS</u>	<u>\$ SPENT</u>	<u>TOTAL SPD \$ SPENT</u>	<u>% SPD FUNDS</u>
*Brevard	1	9,138	182,920	5.0%
Broward	2	1,183	208,421	.6%
*Central Florida	0	-	42,764	
*Chipola	1	1,981	38,353	5.2%
*Daytona	40	14,587	149,955	9.7%
Edison	0	-	51,055	
*Florida JC Jax	22	12,039	439,786	2.7%
*Florida Keys	8	2,025	27,653	7.3%
Gulf Coast	0	-	55,467	
Hillsborough	1	4,796	187,131	2.6%
*Indian River	0	-	132,000	
*Lake City	0	-	83,153	
Lake-Sumter	0	-	28,096	
Manatee	8	3,079	96,338	3.2%
Miami-Dade	1	6,690	681,497	1.0%
*North Florida	0	-	33,825	
*Okaloosa-Walton	1	16,765	50,348	33.3%
Palm Beach	0	-	130,008	
*Pasco Hernando	1	2,947	43,744	6.7%
Pensacola	0	-	190,365	
Polk	0	-	81,930	
*Santa Fe	0	-	132,169	
*Seminole	1	660	118,781	.6%
*South Florida	0	-	9,985	
St. Johns River	1	385	34,445	1.1%
St. Petersburg	54	20,265	211,647	9.6%
Tallahassee	0	- **	35,171	
Valencia	1	1,720	140,406	1.2%

Note: 1979-80 was the last year for which cumulative data was required to be reported to the Division of Community Colleges.

*Area vocational education schools

**At the February 20, 1985 public hearing, the Director of Applied Sciences at Tallahassee Community College reported that approximately \$3000 were spent for vocational education faculty during 1979-80.

TABLE THIRTEEN

1982-83 FTE for Vocational Education Faculty at Florida's Community Colleges		
Community College	Voc. Ed. FTE	All Instructional FTE
*Brevard	149.8	335.2
Broward	195.4	444.1
*Central Florida	66.4	127.5
*Chipola	18.2	51.1
*Daytona Beach	190.1	388.6
Edison	42.9	115.4
*Florida JC Jax	332.1	678.3
*Florida Keys	23.8	53.7
Gulf Coast	40.0	98.4
Hillsborough	111.2	263.4
*Indian River	111.6	216.1
*Lake City	66.9	124.1
Lake-Sumter	19.7	55.0
Manatee	46.4	126.3
Miami-Dade	359.5	1074.1
*North Florida	13.7	36.6
*Okaloosa-Walton	38.5	113.6
Palm Beach	107.0	254.4
*Pasco-Hernando	96.4	153.9
Pensacola	140.1	337.8
Polk	63.2	134.0
*Santa Fe	102.2	242.9
*Seminole	89.5	226.5
*South Florida	29.2	53.4
St. Johns River	15.2	59.0
St. Petersburg	234.2	521.4
Tallahassee	34.8	111.9
Valencia	106.6	276.5
TOTAL FTE	2,844.7	6,673.4

*Area Vocational Education Schools

Education lists technical updating as the first of four priorities for the use of federal personnel development funds (Section 3.051). Further analysis reveals that of the total available dollars, only \$99,000 or 7.1 percent was used for technical updating. It should be noted that some technical information is available through such activities as the Annual Vocational Education Workshop.

The high priority placed on technical updating is appropriate, particularly in view of the findings of the Florida High Technology and Industry Council in its review of the electronics field. The report based on the Council's review of programs in Southeast Florida indicates that the professional and technical qualifications of electronics instruction are, in many instances, deficient.

To correct such deficiencies, resources will have to be focused more clearly on updating. The Carl Perkins Vocational Education Act of 1984 provides for grants to implement industry-education partnership training programs in high-technology occupations. If appropriated, these funds will be used for training and retraining of instructional and guidance personnel. In addition, contributions by business and industry must be recognized and encouraged. At present, the Division of Vocational, Adult and Community Education has successfully used federal dollars to complement the support provided by such firms as General Motors in the development of statewide and regional technical workshops. Such partnerships should be given added impetus through the increased commitment of available federal dollars as incentives for these jointly-sponsored activities. The interrelationship of state and federal funds should also be addressed in the vocational inservice plan discussed earlier.

While the federal dollars for personnel development should not be unduly categorized or earmarked, a majority of these funds in the school district sector should be used for technical updating training activities toward initial and renewal certification. Currently, many of the workshops and training activities held in conjunction with business and industry and also the faculty exchange programs are not recognized for the purpose of certification. Traditional education coursework continues to be the primary avenue for certification credit.

Recommendations:

1. A greater proportion of the Federal Vocational Act funds available for personnel development should be directed to statewide technical updating in fields with relatively few teachers in which local training is not economically or logistically practical.
2. A majority of the Federal personnel development funds should be used for technical updating and other training activities which earn credit for initial or renewal certification.

1985-87 Budget Request for Technical Updating

The 1985-87 budget request of the Division of Vocational, Adult and Community Education includes \$400,000 for each year of the 1985-87 biennium. The purpose for these funds is to provide vocational teachers with the opportunity and means to stay current with the rapidly changing technology of their fields. In addition to a project director and secretary, the initial funds will provide

inservice activities for approximately 200 electronics teachers and 250 automotive instructors. The narrative accompanying this budget request states:

Vocational Education in Florida must accelerate the pace required for programmatic changes and respond to changing technology if it is to play an effective role in Florida's industrial development and economic growth. Florida's vocational educators must be prepared to meet this challenge as well as the goal of the State Board of Education and the Governor to place the state in the nation's upper quartile in educational achievement. In order to provide high quality vocational education programs and to provide students with up-to-date preparation for the advanced technology of the world of work, it is imperative that vocational teachers have an opportunity and means to stay current with the fast-changing technology of their fields. The currentness of teachers' technological knowledge and skills has traditionally been a major concern in vocational education in Florida. In the workplace, technological change is now occurring at a rate unprecedented in history. To insure that instruction is relevant, a determination must be made of the state of the art in different program areas, student worker competencies must be identified by employers, the current state of teachers' knowledge and skills must be identified, and specific inservice education provided for teachers. In Florida, the High Technology and Industry Advisory Council has recommended that teachers in high technology programs be updated, especially those in electronics programs. Thus, the teachers of industrial electronics and electronics technology programs have been targeted for special inservice education. In addition, due to the increasing use of computers in new automobiles, teachers of automotive mechanics and automotive technology programs have been targeted for special inservice education.

The initiative demonstrated by this request is commendable. It should be supported in the context of the plan called for earlier in order to permit the development of a clear strategy for addressing these needs while promoting the most effective participation for all involved: teachers and supervisors, local administrators, advisory committees and regional councils, professional and trade associations, colleges and universities, business and industry, state advisory committee and the Division of Vocational, Adult and Community Education.

Recommendation:

The 1985-87 budget request for technical updating should be approved and its role in the overall strategy for vocational personnel training clearly described and addressed in the Master Inservice Plan for Vocational Educators.

Access to the Means for Updating

Given responsive policies, sufficient motivation and resources for inservice education, the remaining issue addressed by the Commission is the identification of the most appropriate methodology for vocational teacher updating. In a recently published study, Hamilton and Wonacott (1984) identified five delivery

techniques with high potential for professional and technological updating: work experience internships; university and college course work; workshops, conferences and seminars; industry observation; and part-time employment. The researchers included the following examples for each method:

- Work Experience Internships - Lake County Area Vocational Technical Center in Eustis, Florida, uses an approach called the Renewal of Occupational Experience. Instructors are given an opportunity to return to work in business or industry for the purpose of reviewing their occupational skills. The instructor works up to five days at the host business or industry. The staff rotates through the experience, with each instructor participating about once every three years. Instructors continue to receive their regular teaching salary and inservice funds provide substitute teachers to assume the duties of the internship participants.
- University and College Course Work - The Mequon-Thiensville School District in the city of Mequon and the village of Thiensville, Wisconsin encourages vocational teachers to earn staff development credits by taking university and college course work. Instructors are required to earn four staff development credits every two years with at least one earned per year; teachers receive one credit for each semester credit of course work taken. Teachers are not reimbursed for tuition or other expenses involved.
- Workshops, Conferences, and Seminars - The College of Agriculture and Home Economics of The Ohio State University has offered a summer program "Technical Update of Teachers of Vocational Agriculture" since 1980. Each year the program consists of between fifty and sixty individual workshops. From 50 to 60 percent of the high school vocational agriculture teachers in the state register for the program each year.
- Industry Observation - The State of Connecticut offers a program for school counselors, in conjunction with two universities in the state, in which counselors spend 120 hours during six weeks in the summer observing and participating in the activities of a host site in business and industry. Participating counselors receive a modest stipend from the state and are allowed some expenses during the period. Then, counselors take a seminar at one of the two universities, in which they plan and carry out a project for students in their school using the information they have gained in this exposure to the world of work.
- Education and Industry Staff Exchange - Orangeburg-Calhoun Technical College in Orangeburg, South Carolina operates a personnel exchange program with local industries. An instructor of the college takes the place of an industrial worker, actually performing the work of that person, while the industrial worker assumes the teaching duties of the instructor. Length of the exchange has varied from two to eight weeks.

As part of the study by Hamilton and Wonacott, the assistance of a national panel of experts was obtained in rating the effectiveness of these various

delivery methods both in terms of knowledge transfer and skill acquisition. A list of these individuals may be found in Appendix F. Table Fourteen displays the results of this effort. Clearly, experience in industry through internships, part-time employment or exchange programs was perceived as the most effective approach. University coursework was also viewed positively with regard to the transfer of knowledge.

Two strategies are presented by the Commission to complement and augment these findings. First, the majority of vocational instructors in school districts and community colleges are employed on nine or ten-month contracts. It is suggested that this contract period be extended to 12 months on a periodic basis, once every three years. If this is not possible due to collective bargaining or other considerations, then the instructors should be employed on a contracted services basis or receive leave with pay. This additional two or three months would be used for some form of industry-based experience in the instructor's field of expertise. The cost for such an approach would be relatively low - between 4 and 6 percent of the instructor's salary on an annual basis - and, in

TABLE FOURTEEN

RELATIVE EFFECTIVENESS OF TEACHER TECHNOLOGICAL
UPDATE TECHNIQUES IN DEVELOPMENT OF TEACHER KNOWLEDGE AND SKILL

Update Technique	Knowledge	New Skill
Industry Observation and visits	*some information, increased awareness	very limited and ineffective
Workshops, Conferences, and Seminars	**moderate amounts of information, depending upon length	*relatively simple skills not requiring extensive practice
University and College Course Work	****large amounts of information can be obtained	*some skill development can be included, depending upon nature of tasks and equipment availability
Part-time Employment	**some information can be obtained, depending upon resourcefulness of teacher	***substantial skill development if with state-of-the-art firm
Work Experience Internship	***substantial information if carefully planned and pursued	****extensive skill development if a planned sequence of experiences
Education/Industry Staff Exchange	***substantial information if carefully planned and pursued	****substantial skill development if with state-of-the-art firm

KEY: The asterisks rate effectiveness as follows:

* = marginal effectiveness
** = moderate effectiveness

*** = substantial effectiveness
**** = very high effectiveness

Source: Hamilton and Monacott, Updating Teachers for Tomorrow's Technology: A Strategy for Action. Columbia: The National Center for Research in Vocational Education, Ohio State University 1984.

the case of an exchange in which an industry staff person took the instructor's place, there would be no added cost. This procedure should also remove technical barriers with regard to payroll, benefits, insurance and other benefits which have been cited as deterrents to such arrangements. Such experience should be eligible to generate credit for recertification purposes. These activities should be scheduled on a rotating basis to prevent any undue pressure on a given business or industry in a given year.

A number of districts and colleges have used this technique with positive results. For example, a variation of this approach is presently being successfully implemented in Broward County. Each year the school board invites business and industry to provide on-site retraining and updating opportunities for vocational instructors during the summer. These activities last from two to six weeks and involve classwork, presentations by consultants, and floor work in the plant. The training is designed by the host companies with the assistance of school district staff and craft advisory councils. The cost of the instructors' salaries and substitute teachers is shared by the companies and the school boards. In the area of electronics, approximately ten companies provide slots for 12 instructors so no one business is overburdened. This district is now extending this approach to the automotive field in cooperation with Ford and General Motors. In Palm Beach County, the school board has recently approved a plan for vocational instructors to spend two weeks with pay at a local business/industry every five years.

The second strategy identified by the Commission as a means to augment technical updating is in the use of summer institutes. The 1983 Legislature created Summer Inservice Training Institutes and appropriated \$9.2 million for their support. These institutes are operated by districts with the involvement of university, college and Teacher Education Center personnel and they are designed to provide intensive subject matter content training in priority instructional areas. The 1983-84 summer institutes focused on mathematics and science. In 1984-85, the summer institutes will be concentrating on these subject areas as well as foreign language, computer education, teachers as advisors and textbook selection council members. The same amount of funding, \$9.2 million, is available.

One concern brought to the Commission's attention during the study related to the limited accessibility of some university courses particularly at the graduate level. For example, vocational instructors wishing to enroll in high demand courses in such areas as business, computer science, and management are often required to qualify for competitive admission to the program. While Colleges of Education are generally amenable to admitting teachers on a special student basis, this is often not the case in other colleges and programs. State universities should permit employed vocational instructors to enroll in courses which apply to recertification on a special student basis.

Recommendations:

1. School districts and community colleges should work with business and industry to provide vocational instructors with periodic opportunities for industry-based work experience in their field of expertise. Business and industry should be encouraged to provide matched funding to complement available inservice resources to cover the cost of instructor salaries, substitute teachers and other related expenses.

2. The summer inservice institutes should be expanded to include selected vocational fields. The eligible vocational areas should be designated annually by a statewide committee which includes representation from both vocational education and business and industry.
3. To promote accessibility to university training, state universities should permit vocational instructors to enroll on a special student basis in courses which apply to recertification.

Computer and Telecommunications Technology and Inservice Education

In addressing the needs of vocational educators for technical updating, the potential of computers and other educational technology must be fully considered. The Master Plan for Postsecondary Education endorsed the use of telecommunications technology to promote access to postsecondary education.

Modern technology can strengthen learning and give cost-effective access to a wide range of educational resources. Technology offers new instructional possibilities and gives greater access to the best elements of postsecondary education. Its role is already significant but has not even come close to approaching its potential. While new computer and telecommunication technologies probably will not replace conventional teaching styles and delivery systems in the near future, the application of technologies to address specific administrative and instructional objectives is increasing.

Educational technology will be of particular value in meeting many of the needs for postsecondary education over the next two decades. For example, the demand for more career education and personal enrichment by older students and the continuing education needs of practicing professionals may be met by bringing education to these people through technology. (page 53)

The Commission has recently completed a feasibility study on the establishment of a state satellite network system which resulted in a positive recommendation for the creation of such a system. In addition to this potential system, there are a variety of resources already in place that can be more fully used to provide inservice instruction to vocational and other personnel. For example, the Florida Information Resource Network, when completed, will connect the 67 school districts, 28 public community colleges, and nine state universities in a statewide data communications network with both instructional and administrative computing capabilities. A Darome Teleconference System, which has the capability of linking phones at up to 40 different locations, has just been installed at Lively Vocational Technical Center in Tallahassee. In addition, public vocational centers with electronics programs have been encouraged by the Division of Vocational, Adult and Community Education to obtain satellite receiving dishes for use in their training programs. Many of the state universities and community colleges already have satellite dishes in place which can receive national, state or industry-initiated programming geared to inservice needs. The State University System's Florida Engineering Educational Delivery System (FEEDS) network facilities could be used for this purpose. Many of these sites are used primarily in the evening and could be scheduled for after-school use. In fact, one FEEDS site is located at Pinellas Park High School in affiliation with the University of South Florida. The video-tape

system employed by FEEDS is cost effective and could be replicated for use with vocational instructors. Coordination of this approach with the Darome teleconferencing system would enhance the video presentations with audio-back capability. Medical schools are making increasing use of computer simulations for skill acquisition and practice. This technique would also be applicable in many vocational areas.

Recommendation:

In implementing its plan for inservice training, the Department of Education should continue to explore the application of telecommunications and other technology for inservice training purposes. In addition, the Division should work closely with the Office of Teacher Certification to assure that existing and proposed requirements for initial state certification and renewal do not unduly restrict the use of technology for training activities.

D. The State Master Teacher Program and
Salary Compensation for Vocational Personnel

The proviso language for this study directed the Commission to provide "a determination of appropriate criteria related to excellence in teaching through which vocational educators may participate in a state merit pay plan including the role of educational degrees in such criteria."

The master teacher program was enacted by the 1983 Legislature and entitled the "Florida Meritorious Instructional Personnel Program." This program was amended significantly during the 1984 Legislature and the program was renamed the "State Master Teacher Program". The original 1983 version of the master teacher program required a master's degree in the subject, field, or service area where the majority of the candidate's teaching duties occur. Due to extensive concerns raised by the vocational education community and others about the original program requirements, the master's degree requirement was deleted during the 1984 legislative session. The qualifications to participate in the program as an associate master teacher now require the following:

1. Four years teaching experience (with at least two years in Florida) and a professional service or continuing contract.
2. Either a master's degree in the appropriate field or a certificate at the vocational level of training, or attainment of a superior score on a subject area examination. (When the appropriate subject area examination is available, the examination requirement will supersede the degree or certificate requirement.)
3. Superior performance as evaluated by the applicant's principal using a reliable, valid, and normed performance evaluation system approved by the State Board of Education. (Note: Only two such systems have been approved to date by the State Board of Education: the Florida Performance Measurement System and the teacher evaluation system utilized in Dade County).
4. The principal is allowed to recommend additional evaluation points for an applicant if he determines that the evaluation system fails to recognize adequately the performance of the applicant.

The minimum annual award for associate master teachers is \$3000 to be paid beginning in June 1985.

With the exception of two concerns, the vocational education community appears to be satisfied with the new criteria, and believes that vocational teachers who lack a master's and perhaps a bachelor's degree yet excel in the classroom now have a fair opportunity to become master teachers. One concern expressed to the Commission is the requirement that a vocational instructor with a bachelor's degree must attain a master's degree in order to be eligible. While it is understandable that an individual without a college degree would be significantly restricted by the master's degree requirement, imposition of this requirement on a bachelor's degree recipient is consistent with practice for other areas of the curriculum. The Commission suggests that a complete year of experience with the current provisions be obtained prior to consideration of further modifications or exemptions for vocational instructors. The second

concern relates to the availability of subject area tests for use in the program. The NOCTI examinations described earlier should improve this situation considerably if they are reinstated in Florida.

The specific proviso language and legislative charge to the Commission was written before the master's degree requirement was deleted; the changes which have now been made in program criteria appear to be appropriate. However, as discussed in Section A, if the current Florida Performance Measurement System is not valid for determining teaching effectiveness for vocational educators, then this system should be revised or another reliable and valid performance evaluation system substituted by the State Board of Education for evaluation of vocational educators. Until FPMS is modified, principals should be encouraged to utilize criterion #4 above and incorporate additional evaluation points for the vocational educator whose performance is not adequately evaluated by the current evaluation system.

A number of Florida school districts now provide a salary supplement for work experience which was attained prior to entering the teaching profession. For example, in some districts a plumber with 15 years experience in the profession may receive an additional \$1500 compensation when entering the teaching profession. In all cases, vocational instructors entering the teaching profession receive as much as a beginning teacher with a bachelor's degree; however, the practice of providing salary adjustments as an additional bonus is currently only available in a few districts.

Salary adjustments are considered in S. 231.532(3), F.S. relating to the district quality incentives (merit school) program which provides for monetary awards based on student achievement, vocational placements, and other factors. The issue of salary adjustments for vocational educators has also been addressed by the High Technology and Industry Council and other groups in which business and industry representatives have suggested that additional compensation be provided to vocational instructors commensurate with compensation paid to individuals in private industry.

The Commission fully supports the commitment of the State Board of Education to raise teacher salaries and believes that additional incentives are needed to attract and retain competent vocational instructors because of the competition with business and industry. If vocational teaching is not financially attractive, the efforts of this Commission and other groups to improve the quality of vocational education will be restricted.

Recommendations:

1. The Postsecondary Education Planning Commission supports the State Master Teacher Program criteria identified by the 1984 Legislature as being appropriate for the participation of vocational educators.
2. School districts should assure that their salary schedules for instructional personnel take into consideration factors in addition to traditional criteria such as a college degree, education coursework or years of teaching experience, including criteria unique to vocational educators such as years of occupational experience, subject matter competence, and other appropriate measures.

V. CONCLUSION

The Postsecondary Education Planning Commission recognizes the important contribution of vocational education to the people of Florida and to the economic development of the State. Highly competent vocational instructors are fundamental to ensuring the effectiveness and quality of vocational education. The Commission believes that the state certification and preparation process for vocational education instructors who teach in school districts may be discouraging persons in business and industry from entering the teaching profession and has provided several recommendations for greater flexibility in state certification requirements while retaining minimum quality control standards for instructor competence at the state level. The Commission recognizes that local control for setting vocational instructor standards at community colleges has been effective and should be retained.

The Commission believes that inservice training for vocational teachers in terms of funding, availability and content validity has been inadequate and presents several recommendations for strengthening inservice education especially in rapidly changing technological areas. Recommendations for change in the curricula of preservice teacher education programs in Colleges of Education are also presented. The vital linkage between the educational community and business and industry in planning for preservice and inservice education provide a central theme which is stressed throughout the pages of this report.

Finally, the Commission believes that the implementation of the master teacher program as directed by the 1984 Legislature should be facilitated before further changes are made in the program criteria.

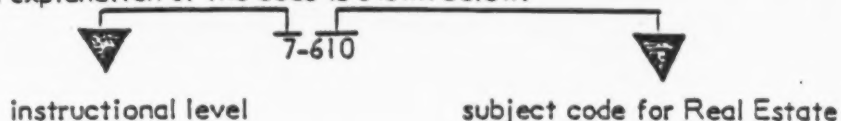
APPENDIX A

Occupational Categories for Vocational
Certification by the State

JULY 1, 1984

VOCATIONAL SUBJECTS FOR THE 1984-85 SCHOOL YEAR

Each subject is listed by the data processing code and the various instructional levels at which the subject may be issued. The data processing code as shown on a Florida teaching certificate consists of four digits. The first digit designates the instructional level, and the last three digits identify the subject. An explanation of the code is shown below:



The instructional levels are interpreted as follows:

- 2 = Adult
- 4 = Secondary (grades 7-12)
- 6 = Elementary and Secondary (grades K-12)
- 7 = Vocational-Technical (coverages in the fields of: Agriculture, Business, Distributive, Diversified Occupations, Health Occupations, Homemaking, Industrial, and Public Services)

ADULT EDUCATION

Administration of Adult
Education * 2-114
Special Interest 2-168

* May be shown only on a Regular Certificate

BUSINESS EDUCATION

Accounting * 7-641
Business Data Processing *... 7-414
Clerical * 7-644
Management & Supervision *.. 7-642
Secretarial * 7-643
Teacher-Coordinator of Cooperative
Business Education ** 7-628
Vocational Office
Education ** 7-640

* Part-time only

** An addition to a Regular Certificate covering Business Education

AGRICULTURE EDUCATION

Agricultural Mechanics 7-423
Agricultural Production 7-421
Agricultural Products 7-424
Agricultural Resources 7-425
Agricultural Supplies 7-422
Exploratory Agriculture * 4-684
Forestry 7-139
General Agriculture 2-003+
..... 4-003
Horticulture 7-541
Vocational Agriculture 4-002

+ Adult instructional level

* An addition to a Regular Certificate covering an elementary, secondary or vocational subject (Except Jr. ROTC)

DISTRIBUTIVE EDUCATION

Advertising and
Promotion 7-615
Banking and Finance 7-603
Teacher-Coordinator of
Cooperative Distributive
Education 7-623
Distributive Education 7-632
Hotel Training 7-605
Insurance 7-607
Marketing and Management... 7-648
Real Estate 7-610
Restaurant 7-645
Retailing 7-616
Transportation 7-647
Wholesaling 7-646

CONTINUATION OF VOCATIONAL SUBJECTSDIVERSIFIED OCCUPATIONS EDUCATION

Teacher-Coordinator of Diversified Cooperative Training*	7-501
Teacher-Coordinator of Work Experience Programs**	7-670

- * An addition to a Regular Certificate covering a secondary or vocational subject
- ** An addition to a Regular Certificate covering an elementary, secondary or vocational subject.

HEALTH OCCUPATIONS EDUCATION

Biomedical Equipment Technologist	7-690	Mental Health	7-673
Dental Assistant.....	7-417	Occupational Therapy Assistant.....	7-693
Dental Laboratory Technology.....	7-662	Operating Room Technician.....	7-678
Electrocardiograph Aide.....	7-681	Paramedic.....	7-691
Electroencephalograph Technician	7-677	Pharmacy	7-694
Emergency Medical Technician	7-676	Physical Therapy Technician.....	7-665
Laboratory Assistant.....	7-672	Practical Nursing	7-505
Laboratory Technology.....	7-583	Respiratory Therapy Technician.....	7-679
Masseur.....	7-524	Respiratory Therapy Technologist.....	7-663
Medical Assistant.....	7-692	Technical Optics.....	7-410
Medical Records Technician.....	7-664	Technical X-Ray.....	7-412
Medical Transcriptionist	7-701		

INDUSTRIAL EDUCATION

Air Conditioning and Heating Mechanics	7-415	Body Fender Repair	7-599
Air Controller	7-697	Building Maintenance	7-569
Aircraft Mechanics.....	7-507	Business Machine Repair	7-500
Apparel Manufacturing.....	7-518	Cabinet Making and Woodworking	7-508
Appliance Repair.....	7-574	Carpentry	7-540
Automotive Body.....	7-695	Commercial Art	7-601
Automotive Machine Shop	7-703	Commercial Driving	7-546
Automotive Mechanic.....	7-506	Commercial Fishing	7-700
Automotive Upholstery	7-696	Computer Servicing	7-699
Aviation Administration.....	7-698	Custodial	7-683
Avionics	7-702	Diesel Mechanics.....	7-509
Blueprint Reading	7-554	Drafting	7-521

CONTINUATION OF VOCATIONAL SUBJECTS

INDUSTRIAL EDUCATION

(continued)

Drywall Installation	7-708
Electrical	7-031
Electronics	7-535
Engineering Model Making	7-687
Fabric Maintenance	7-653
Flooring	7-572
Furniture Repair	7-561
Gasoline Engine Repair	7-586
Glazier	7-555
Gunsmith	7-530
Industrial Engineer	7-580
Industrial Plastics	7-685
Instrumentation	7-536
Insulation Installation	7-705
Jewelry Manufacturing and Repair	7-704
Machine Shop	7-510
Millwrighting	7-537
Operating Engineer	7-578
Ornamental Iron	7-558
Painting	7-553
Personal Services	7-655

Photography	7-527
Plumbing	7-533
Printing	7-094
Quantity Foods	7-657
Roofing	7-565
School Bus Driving Training	7-666
Seamanship	7-674
Service Station	7-420
Sewing Machine Maintenance and Repair	7-686
Sheetmetal	7-511
Shoe Repair	7-526
Solar Energy Technology	7-688
Stationary Engineer	7-675
Structural Steel	7-568
Supervisory Training	7-544
Surveying and Mapping	7-707
Tile Setting	7-706
Trowel Trades	7-532
Welding	7-525

PUBLIC SERVICES EDUCATION

Correctional Officer	7-682
Fire Fighting	7-549
Law Enforcement	7-522
Public Administration	7-689
Water and Wastewater Plant Operator	7-419

TECHNICAL EDUCATION

Technical Aerospace	7-661
Technical Chemistry	7-401
Technical Construction	7-406
Technical Electronics	7-403
Technical Human Services	7-671
Technical Mechanics	7-400

VOCATIONAL ADMINISTRATION

Coordinator of Industrial Education	7-552
District Coordinator of Adult Distributive Education	7-650
District Coordinator of Vocational Business Education	7-651
District Supervisor of Cooperative Education	7-659
Local Director or District Supervisor of Vocational Education	7-550

MISCELLANEOUS

Homemaking	7-071
Junior ROTC	4-413
Occupational Specialist	6-204

APPENDIX B

Survey Instruments for Examining
Preservice Vocational Education Programs

A SURVEY OF PRESERVICE VOCATIONAL EDUCATION PROGRAMS

Directions: The purpose of this survey instrument is to obtain some general information about the 4-year baccalaureate vocational education programs offered at state universities in Florida. You are being asked to complete this survey because a student(s) or recent graduate(s) of a specific program is now under your supervision. Note if you represent the university, please answer all questions. If you represent a school district, please only answer the questions with an asterisk (*). Please respond by checking the category which best applies or supplying information requested in the blank provided.

If you have any questions please call Dr. Hugh Hinely/Fara Rohani at (904) 644-6029.

Name _____

Address _____

Business Phone # _____

Position _____

Program you represent _____

University or School you represent _____

I. AVAILABILITY

	<u>Yes</u>	<u>To Some Degree</u>	<u>No</u>	<u>Do Not Know</u>
1. Is recruiting information being utilized to provide information about the programs to prospective students?	_____	_____	_____	_____
2. All students are encouraged to enter the program, including; racial minorities, male, female, and handicapped students.	_____	_____	_____	_____
3. Orientation sessions are held to acquaint students with the program before the program begins.	_____	_____	_____	_____
4. Printed orientation materials are provided to the students for the program.	_____	_____	_____	_____

I. AVAILABILITY (continued)

Yes To
Some Degree No Do Not Know

5. Do student encounter any obstacles during the application, admission, and duration of study?

If answer is yes, or to some degree, please specify:

6. Are there limitations on the number of students admitted to any program?

7. Are there limitations on the number of students enrolled in any program?

8. Have any changes been made in recruitment strategies for the program during the last five years?

If answer is yes or to some degree, please specify:

9. Are courses scheduled throughout the day?

I. AVAILABILITY (continued)

Yes To
Some Degree No Do Not Know

10. Are courses scheduled at times that are convenient for the students?

11. Are the courses located in a safe and convenient location for students, including:

a. Male

b. Female

c. Handicapped

12. Classroom, labs, and auxillary areas are conveniently located and easy to use by:

a. Male students

b. Female students

c. Handicapped students.

13. The courses that the students need to take in order to meet the program requirements are offered frequently.

14. At the beginning or ending of any semester students can enter or complete the program.

*15. Are you aware of any additional degree programs which have been added in the past five years in response to high technology.

If answer is yes or to some degree, please specify:

I. AVAILABILITY (continued)

Yes To
Some Degree No Do Not Know

- *16. In your opinion, are there sufficient preservice programs at public universities in Florida? If no, in which program areas and/or geographic areas are additional programs needed?

II. CONTENT VALIDITY

- *1. Are you aware of any changes which have been made in the program content or the curriculum within the last five years?

If answer is yes or to some degree, please specify:

- *2. Have any changes been made in the content of the program curriculum to comply with the demands of high technology?

If answer is yes or to some degree, please specify:

B-4

II. CONTENT VALIDITY (continued)

3. To what extent is your program competency-based?

- a. 100% _____
- b. 75% _____
- c. 50% _____
- d. 25% _____
- e. None _____
- f. Do not know _____

4. To what extent are the curriculum Mapping materials being utilized in the programs?

- a. 100% _____
- b. 75% _____
- c. 50% _____
- d. 25% _____
- e. None _____
- f. Do not know _____

5. To what extent are the students in the program required to use the curriculum Mapping skills?

- a. 100% _____
- b. 75% _____
- c. 50% _____
- d. 25% _____
- e. None _____
- f. Do not know _____

B-5

II. CONTENT VALIDITY (continued)

Yes To
Some Degree No Do Not Know

- *6. Are students in the program being taught how to utilize curriculum Mapping materials? _____
7. Have the competency-based and curriculum Mapping materials used in the program been up-dated during the last three years? _____
- *8. Is there a relative balance of courses offered in professional education and skill content areas? _____

If answer is no or to some degree, please specify why not:

9. What is the percentage of the required professional education courses as compared to content courses during the junior and senior year?

- a. 100% _____
- b. 75% _____
- c. 50% _____
- d. 25% _____
- e. None _____
- f. Do Not Know _____

II. CONTENT VALIDITY (continued)

Yes To
Some Degree No Do Not Know

10. What is the percentage of content skill courses offered during the junior and senior years?

- a. 100% _____
- b. 75% _____
- c. 50% _____
- d. 25% _____
- e. None _____
- f. Did not know _____

11. Is there an Advisory Committee for the program or the department?

If answer is yes or to some degree, please specify by providing the name and title, and phone number of at least three members:

*12. Do advisory committee include industry school district and student representatives.

- a. industry
- b. school district
- c. students

II. CONTENT VALIDITY (continued)

To
Yes Some Degree No Do Not Know

- *13. Has the program advisory committee been involved in design of the program curriculum?

If answer is yes or to some degree, please specify how:

- *14. Is there an exchange program with business and industry for university faculty?

If answer is yes or to some degree, please specify:

15. Have the program faculty been provided with opportunities (during the past two years) to attend inservice training as such:

- a. Professional development
- b. Workshops
- c. Professional conferences
- d. Technical updating
- e. Sabbatical
- f. Other (please specify)

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II. CONTENT VALIDITY (continued)

*16. The length of the internship experience for students is:

- a. More than adequate _____
- b. Adequate _____
- c. Less than adequate _____
- d. Not applicable _____

*17. The quality of the internship experience for students is:

- a. More than adequate _____
- b. Adequate _____
- c. Less than adequate _____
- d. Not applicable _____

*18. In your opinion what improvements can be made in the content of the preservice vocational education programs?

*19. How do preservice vocational education degree graduates compare to those who enter teaching out of business and industry?

a. on the whole, Preservice Vocational degree graduates perform:

- 1. Florida Teacher Certification Exam
- 2. Classroom effectiveness
- 3. Job longevity

Better

The same

Worse

_____	_____	_____
_____	_____	_____
_____	_____	_____

II. CONTENT VALIDITY (continued)

20. Please provide us with the actual number of graduates 1983-84 for each program and the number placed in teaching positions in Florida. If data for 1983-84 is not available, please provide the most recent data you have.

<u>Program</u>	<u>Number of Graduates</u>	<u>Year</u>	<u>Number placed in teaching positions</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

B-10

Thank you for taking the time to complete this survey. Please return the survey in the self addressed stamped envelope by JANUARY 4, 1985

A SURVEY OF PRESERVICE VOCATIONAL EDUCATION PROGRAMS STUDENT SURVEY

Directions: The purpose of this survey instrument is to obtain some general information about the 4-year baccalaureate vocational education programs offered at state universities in Florida from your perspective as a recent graduate or a senior enrolled in the program. Please respond by checking the category which best applies to you or supplying information requested in the blank provided. If you have any questions about the survey instrument please call Dr. Hugh Hinely/Fara Rohani at (904) 644-6029.

Name _____

Address _____

Phone # _____

University where you are/were in attendance _____

Vocational program you are/were in _____

Your status; Senior student _____ Beginning Teacher Education Program participant _____

Other _____
(please specify)

I. AVAILABILITY

1. Did the university provide information about the Preservice Vocational Education Programs to you prior to your enrollment?
2. In your opinion, are all students encouraged to enter Preservice Vocational Education Programs, including; racial minorities, male, female, and handicapped students.

Yes

To
Some Degree

No

I. AVAILABILITY (continued)

Yes To
Some Degree No

3. Were you provided with an orientation session about the programs before the classes began?
4. Were you provided with printed orientation materials about the program?
5. Did you encounter any obstacles during application, admission, and duration of study?

_____	_____	_____
_____	_____	_____
_____	_____	_____

If answer is yes, or to some degree, please specify:

6. Were courses in your Preservice Vocational Education Programs scheduled throughout the day?
7. In your opinion, were courses scheduled at times that were convenient for the students?
8. In your opinion, were courses located in a safe and convenient location for students, including:
 - a. Male
 - b. Female
 - c. Handicapped

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

B-12

I. AVAILABILITY (continued)

	<u>Yes</u>	<u>To Some Degree</u>	<u>No</u>
9. In your opinion, are classrooms, labs, and auxillary areas conveniently located and easy to use by:			
a. Male students	_____	_____	_____
b. Female students	_____	_____	_____
c. Handicapped students	_____	_____	_____
10. In your opinion, are courses that the students need to take in order to meet the program requirements being offered frequently enough?	_____	_____	_____
11. Is your program designed to be open entry/open exit? That is can students enter or complete the program at the beginning or ending of any semester?	_____	_____	_____
12. Are you aware of any additional degree programs which have been added in the past five years in response to high technology?	_____	_____	_____
13. In your opinion, are there sufficient pre-service programs at public universities in Florida?	_____	_____	_____

If answer is no or to some degree, please specify what programs are needed:

II. CONTENT VALIDITY

1. Are you aware of any changes that have been made in the program curriculum within the last five years?

If answer is yes or to some degree, please specify:

2. Are you aware of any changes that have been made in the program content to comply with demands of high technology?

If answer is yes or to some degree, please specify:

3. Are curriculum Mapping materials used in the program you attended/are attending?

4. Are students in the program being taught how to utilize curriculum Mapping materials?

5. Are students in the program required to use the mapping skills?

<u>Yes</u>	<u>To Some Degree</u>	<u>No</u>
------------	---------------------------	-----------

_____	_____	_____
-------	-------	-------

_____	_____	_____
-------	-------	-------

_____	_____	_____
-------	-------	-------

_____	_____	_____
-------	-------	-------

_____	_____	_____
-------	-------	-------

B-14

I. CONTENT VALIDITY (continued)

Yes To
Some Degree No

6. In your opinion, was there a good balance between courses offered in professional education and those in skill content areas during your junior and senior years?

If answer is no or to some degree, please specify why not:

7. In your opinion, is the length of the internship experience for students:

- a. More than adequate _____
b. Adequate _____
c. Less than adequate _____

8. Did you have any contact with business and industry in conjunction with coursework during your junior and senior years?

If answer is yes or to some degree, please specify:

II. CONTENT VALIDITY (continued)

9. In your opinion, what improvements can be made in the content of the preservice vocational education programs?

B-16

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Thank you for taking the time to complete this survey. Please return the survey in the self addressed stamped envelope by January 14, 1985

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APPENDIX C

On-Site Visits - Schedule
and Interview Form

SCHEDULE OF ON-SITE VISITS TO AREA VOCATIONAL-TECHNICAL
CENTERS AND SCHOOLS

July 31, 1984	- Lee County Area Vocational- Technical Center
November 1, 1984	- Lindsey Hopkins Technical Education Center, Dade County
	- Lake County Community College
	- North Florida Junior College, Madison County
November 27, 1984	- Pinellas Vocational Technical Institute
December 5, 1984	- Pensacola Junior College
December 6, 1984	- George Stone Area Vocational Center, Escambia County
December 19, 1984	- Okaloosa-Walton Junior College
January 28, 1985	- Atlantic Vocational-Technical Center, Broward County
January 29, 1985	- South Technical Center, Palm Beach County

DATE _____

SITE _____

PERSON INTERVIEWED

POSTSECONDARY EDUCATION PLANNING COMMISSION

CERTIFICATION & PREPARATION OF
VOCATIONAL EDUCATION TEACHERS

DIRECTOR'S INTERVIEW FORM

A. Certification

1. Describe the certification requirements and procedures at your institution.

2. If local board (non-state) certification, are these requirements frequently waived? If so, how frequently?

3. Is there a shortage of qualified vocational education teachers in your institution? In what areas?

4. In your opinion, have these certification requirements contributed to a current or anticipated shortage? If so, how?

5. What changes, if any, would you suggest in the process? Why?

6. If under state certification, do you have any special training programs for obtaining a regular certificate?

B. Training

1. Do you feel the vocational education instructors whom you hire are adequately trained? What suggestions do you have for preservice training? Is the content appropriate? Funding adequate?

2. Describe the types of inservice training available to your teachers? Is inservice training adequately funded? Is the content appropriate? Do faculty (even those with a regular certificate) participate on a regular basis? What suggestions do you have for improvements in inservice?

3. How does your staff remain current in their field of specialization (technical updating)? For example, are there exchange programs with business and industry?

4. Is information solicited from vocational education teachers/directors as to their inservice needs? By whom? (e.g. Department of Education, school district, university) In your opinion are these needs met during inservice?
5. How and how often do you evaluate the teaching effectiveness of your vocational faculty and their mastery of the subject matter?

C. Merit Pay

School Districts

1. Have you been involved in planning for the District's Quality Instructional Incentives Program? How will this program affect vocational education teachers?
2. The 1984 Legislature made changes in the State Master Teacher Program (formerly the Florida Meritorious Instructional Personnel Program.) For example the Masters degree is no longer required and a certificate at the vocational level of training is an appropriate criterion to qualify. Superior performance in the classroom will remain as an important criteria. The principal will also be allowed to recommend additional evaluation points for an applicant. What other appropriate criteria related to excellence in teaching would you suggest for vocational educators?

Community Colleges

1. Does the college reward system recognize quality vocational instruction, i.e. merit pay for vocational teachers? If so, how?

APPENDIX D

Occupational Tests Available Through the
National Occupational Competency Testing
Institute (NOCTI)

NOCTI TEACHER OCCUPATIONAL
COMPETENCY TESTS

NOCTI tests are available in 48 different areas. Additional tests are added as they become available.

Air Conditioning and Refrigeration	Electronics
Airframe and Power Plant	Communications
Architectural Drafting	Electronics Technology
Audio Visual	Heating
Communication	Industrial Electrician
Auto Body Repair	Industrial Electronics
Automotive Body and Fender	Machine Drafting
Auto Mechanic	Machine Trades
Baking	Major Appliance Repair
Brick Masonry	Masonry
Building Construction Occupations	Masonry Occupations
Building Trades Maintenance	Materials Handling
Cabinet Making and Millwork	Mechanical Technology
Carpentry	Painting and Decorating
Civil Technology	Plumbing
Commercial Art	Power Sewing
Commercial Photography	Printing-Letterpress
Computer Technology	Printing-Offset
Cosmetology	Quantity Food Preparation
Diesel Engine Repair	Quantity Foods
Diesel Mechanic	Radio/TV Repair
Drafting Occupations	Refrigeration
Electrical Installation	Sheet Metal
	Small Engine Repair (2)
	Textile Production/Fabrication
	Tool and Die Making
	Welding (2)

Source: NOCTI Teacher Occupational Competency Testing, 1985

APPENDIX E

Summary of the 1983-84 Projects Funded
by the Federal Vocational Act

SUMMARY
1983-84 Projects
CATEGORY XII-A
PERSONNEL DEVELOPMENT

Program Area	Proposal Title	No. of Workshops and Days	Amount	Number of Participants
<u>Agriculture</u>	Providing Year-Round Instruction and Supervision Through Individualized Competency-Based Cooperation Education and Supervised Occupational Experience	2/3	8,040	18
	Technical Updating on Micro-Computer Equipment Used in the Agricultural Industry	1/3	7,000	18
	Technical Updating on Micro-Computer Equipment Used in the Agricultural Chemical Products	1/3	4,000	22
	Managing School Forests	1/3	4,000	13
	Professional Updating for First and Second Year Agricultural Teachers	3/2	9,000	18
<u>Business</u>	Inservice Training Activities for Business Education Teachers in the Use of Competency-Based Curriculum Materials	3/vary	15,000	66
	Inservice Training Activities for Business Education Teachers to Update Skills in Teaching Data Processing/Word Processing Programs	10/vary	29,000	285
<u>Diversified</u>	Developing Individualized Related Study Programs for Diversified Cooperative Training and Work Experience Programs	3/1	11,000	103
	Developing Individualized Related Study for Work Experience Programs	N/A	N/A	N/A
<u>Health Occupations</u>	Improvement of Communication Skills of Health Occupations Education Personnel	1/2	1,000	68
	Technical Competency Development for Dental Auxiliary Educators	1/3	3,500	14

Program Area	Proposal Title	No. of Workshops and Days	Amount	Number of Participants
<u>Health Occupations</u>	Clinical Technical Updating for Health Occupations Education	5/5	10,000	74
	Instructors Conference for Hospital Ward Clerks	N/A	N/A	N/A
	Improvement of Articulation Processes for Clinical Laboratory Aide, Technician, and Technology Programs by a Combined Instructors Conference	1/3	4,000	15
	Improvement of Technical and Teaching Competencies for Hospital Ward Clerk Program Instructors and their Supervisors	N/A	N/A	N/A
	Improvement of Professional Competencies for Health Occupations and Public Service Occupations Education Teachers in Utilizing the Competency-Based Education Concept	2/3	4,500	29
	Improvement of Professional Teaching Competencies Through a Systematic Approach to Dynamic Teaching	1/5	3,000	9
	Strengthening Professional Competencies for Integrating HOSA into the Health Occupations Education Program	N/A	N/A	N/A
	Professional Updating for Deans, District Supervisors, and Community College Directors of Health Occupations Education Programs	N/A	N/A	N/A
	Improvement of Professional Competencies for Health Service Aide and Cooperative Health Occupations Education Teachers in Utilizing the Competency-Based Education Concept	N/A	N/A	N/A
	AMA Accreditation Workshop for Paramedic Instructors and Program Managers	1/2	2,260	23
<u>Industrial Arts</u>	Associated Degree Interaction Workshop	1/1	391	140
	Technical Updating for Industrial Teachers and Supervisors	4/5	20,000	11
	Updating the Professional Competency of Industrial Arts Teachers, Supervisors and Teacher Educators	5/1	7,700	176

Program Area	Proposal Title	No. of Workshops and Days	Amount	Number of Participants
<u>Industrial Arts</u>	Technical Updating Workshops for Industrial Education High Technology Program Instructors	21/5	29,000	285
	Updating Professional Competencies of Industrial Teachers	1/5	6,000	23
<u>Marketing</u>	Marketing and Distributive Education Leadership Development	2/3	10,500	27
	Technical Updating for Marketing and Distributive Education Teachers	1/6	4,000	12
<u>Public Service</u>	Criminal Justice Aide Instructors Curriculum Workshop	N/A	N/A	N/A
	Inservice Education for Criminal Justice Aide Instructors	N/A	N/A	N/A
<u>Disadvantaged</u>	Mainstreaming the Academically Disadvantaged Student	5/vary	15,000	80
	Selecting/Adapting/Designing Curriculum for Use with Disadvantaged Students	4/vary	15,000	28
	Competencies for Instructional Resource Specialists	2/vary	7,000	15
	Developing Competencies to Improve Mathematics and/or Reading Skills of Academically Disadvantaged Vocational Students	2/vary	7,000	18
	Competencies for Outreach/Recruiters VESOL Teacher Competencies	1/vary	4,000	16
	Competencies for Vocational Teachers and Administrators Serving Persons with Limited English Proficiency	2/vary	7,000	80
	Competencies for Operating the Vocational Assessment/Occupational Exploratory Component Program (CEP) of the Individualized Manpower Training System (IMTS)	2/vary	7,000	35
	Staff Development on Teaching Handicapped Students in Vocational Education	vary/vary	80,000	214

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TOTAL \$334,891

SUMMARY
1983-84 PROJECT
CATEGORY XII

TEACHER EDUCATION SUPPORTIVE SERVICES

University	Vocational Teacher Educators	Secretarial Support	Travel	Total
FAMU	Administration Business (3) Industrial (4) Industrial Arts (4)	16,000 9,000 12,000 12,000	 3,000 4,000 4,000	60,000
FAU	Marketing (1) (Research Asst.)	3,000	1,600	14,600
FIU	Administration (1) Business (1) Home Economics (2) Health Occupations (1) Industrial (3)	3,000 3,000 6,000 3,000 9,000	1,000 1,000 2,000 1,000 3,000	32,000
UCF	Business (2) Health Occupations (1) Industrial (2)	6,000 3,000 6,000	2,000 1,000 2,000	20,000
UF	Agriculture (7) Business (1) Health Occupations (1)	15,000 3,000 3,000	7,000 1,000 1,000	30,000
UNF	Business (1) Industrial (1) Marketing	3,000 3,000 3,000	1,000 1,000 1,000	12,000
USF	Business (3) Diversified (1) Industrial (4) Industrial Arts (1) Marketing (1)	9,000 3,000 12,000 3,000 3,000	3,000 1,000 4,000 1,000 1,000	40,000
UWF	Administration (1) Business (1) Home Economics (1) Industrial (4) Industrial Arts (1)	3,000 3,000 3,000 12,000 3,000	1,000 1,000 1,000 1,000 1,000	40,000
			TOTAL	\$259,900

SUMMARY
1983-84 PROJECTS
OTHER PERSONNEL DEVELOPMENT

Project Title	Project Recipient	Amount
Annual Vocational Educators' Workshop (travel and per diem)	Districts Community colleges	290,619 51,307
Annual Vocational Educators' Workshop (supportive services)	UCF	30,000
Workshops for District and Community College Vocational Planning and MIS Personnel	Lake County	103,400
Workshop for FVA Board Members	USF	8,000
Development of PBTE Materials for Beginning Vocational Teachers	UCF	60,000
Consultative Services and Technical Assistance in Planning and Personnel Development	FSU	110,000
Florida Vocational Journal	FSU	80,000
Grant Positions for Personnel Development	FAMU	167,200
	TOTAL	<u>\$900,526</u>

APPENDIX F

Members of the Panel of Experts

MEMBERS OF THE PANEL OF EXPERTS

Gary Bunch, Training Manager, Whayne Supply Company, Louisville,
Kentucky

Dr. James Collins, Director, National Council of States of Inservice
Education, Syracuse University, Syracuse, New York

Dr. George Ferns, Professor, Department of Administration and
Curriculum, Michigan State University, East Lansing, Michigan

Alan B. Lesure, Publisher, John Wiley & Sons, Publishers, New York,
New York

Dr. Jack McElroy, Professor, Vocational Industrial Teacher Education,
University of Kentucky, Lexington, Kentucky

Dr. Michael Parsons, Dean of Instruction, Hagerstown Junior College,
Hagerstown, Maryland

Andrea Jones, Supervisor of Human Resource Development Owens/Corning
Fiberglas Technical Center, Granville, Ohio

Dr. John Van Ast, Project Director, Iowa Curriculum Assistance
System, College of Education, Iowa State University, Ames, Iowa

Source: Hamilton and Wonacott, Updating Teachers for Tomorrow's
Technology: A Strategy for Action. Columbus: The
National Center for Research in Vocational Education,
Ohio State University, 1984.